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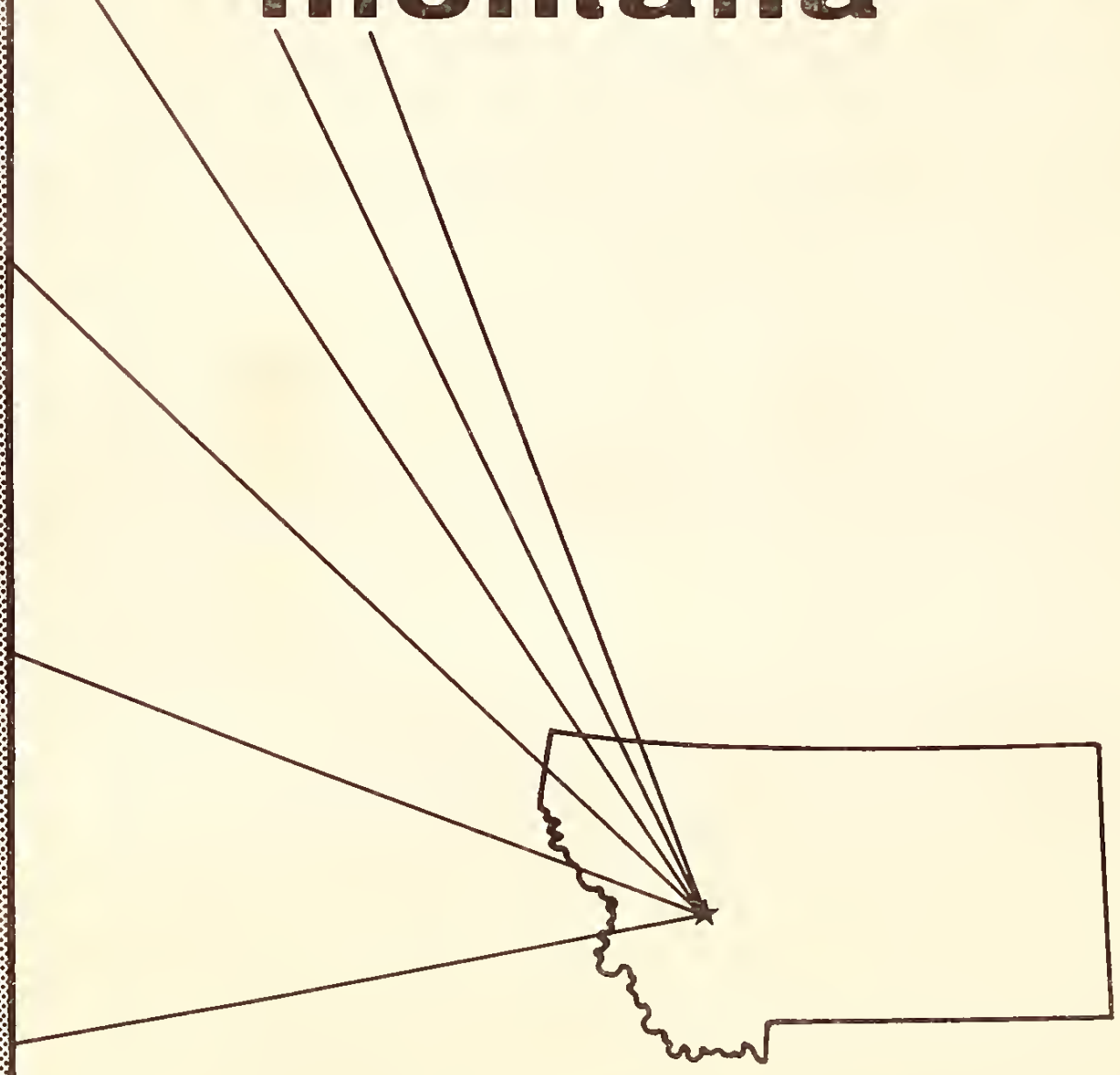
HELENA CITY - COUNTY PLANNING BOARD --- MONTANA

the master plan

for the cities of helena and east helena and the county of lewis and clark montana



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Helena, Montana
The master plan for the cities of Helena and East Helena and the county of Lewis and Clark, Montana

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THE MASTER PLAN
for
THE CITIES OF HELENA AND EAST HELENA
and
LEWIS AND CLARK COUNTY
MONTANA

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Project No. Montana P.5.
Prepared under contract for the

MONTANA STATE PLANNING BOARD

and the

HELENA CITY-COUNTY PLANNING BOARD

by:

Ronald Thompson and Associates
Butte, Montana

The preparation of this report was financed in part through an Urban Planning Grant from the Housing and Home Finance Agency, under the provisions of Section 701 of the Housing Act of 1954, as amended.

MONITOR *Offset Printers*
HELENA, MONTANA

The City of Helena, Montana,
The Mayor and members of its Commission;

The County of Lewis and Clark, Montana,
The Chairman and members of its Board of Commissioners;

The City of East Helena, Montana
The Mayor and members of its Council;

Gentlemen:

The City-County Planning Board takes pleasure in presenting this report, outlining a plan to guide the future growth patterns of the Cities of Helena and East Helena, and the immediately surrounding suburban areas within Lewis and Clark County, Montana.

During any one year there are many projects planned or built, all of which will have an influence upon the future of our area. When the projects of twenty or thirty years are put together, the importance of proper over-all planning and co-ordination becomes evident.

The interest and cooperation of citizen groups, industry, and leaders in local and state government, together with the continued efforts of the individual members of the City-County Planning Board, have made this report possible.

The plans herein presented are not intended to serve as blueprints for individual projects, but as a general design for our area, and as such should be continually studied and revised when necessary, so the people of Helena, East Helena and Lewis and Clark County will constantly have before them the best plan for the present and future that can be devised.

Your favorable consideration and adoption of this plan are respectfully recommended.

Yours very truly,

Hiram S. Dotson, President
Helena, East Helena, and
Lewis and Clark County
City-County Planning Board

January, 1962

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HISTORICAL BACKGROUND

Captain Meriwether Lewis recorded white man's first venture into the Helena area when he made the following entry in his journal on Friday, July 19, 1805:

"this evening we entered much the most remarkable clifts that we have yet seen. these clifts rise from the waters edge on either side perpendicularly to the hight of 1200 feet. every object here wears a dark and gloomy aspect. the towering and projecting rocks in many places appear ready to tumble on us. the river seems to have forced it's way through this immence body of solid rock for the distance of 5 and 3/4 miles and where it makes it's exit below has thrown on either side vast columns of rocks mountains high."

"the river appears to have woarn a passage just the width of it's channel or 150 yds. it is deep from side to side nor is there in the first 3 miles of this distance a spot except one of a few yards in extent on which a man could rest the soal of his foot. several fine springs burst out at the waters edge from the interstices of the rocks....from the singular appearance of this place I called it the gates of the rocky mountains."

The Gates of the Mountains that so impressed Captain Lewis are approximately fifteen miles north of the present Helena; over a century and a half after their discovery, they are now a main tourist attraction of the Helena region. Lewis's observation that "every object here wears a dark and gloomy aspect" certainly was not an omen of the area's future; rich silver and gold mining camps were to flourish here, livestock ranchers were to prosper, and the City of Helena itself was destined to become a trade and transportation center as well as the capital of the State of Montana.

For over four decades after the Lewis and Clark expedition, only a few traders and trappers invaded the Helena area, which had long been the home of the Blackfoot Indians. During the 1850's the United States Government surveyed the area's natural resources, made treaties with the Indians, and investigated the possibilities of building a railroad through the northwest territory.

Lieutenant John Mullan, from 1858 to 1860, directed the construction of a military wagon road between Fort Benton, Montana, and the Dalles, Oregon. The route passed through Wolf Creek Canyon, 40 miles north of the present Helena. Roadhouses and stage stations were soon built along the road, which helped open up the area for settlement.

The first white men who actually settled in the area were immigrant farmers who established themselves about 14 miles north of the present Helena.

In the early summer of 1864, four prospectors who had been searching for gold in the region were discouraged both by their own findings and by the reports of others returning from their own quests for riches. Having exhausted many possibilities and running low on provisions, the four agreed that the little gulch just off the Prickly Pear was their "last chance" before they too would be forced to give up their search. It was here at the present site of Helena, that they discovered placer gold in July of 1864. When they began developing their claim, it proved to be a fabulously wealthy one. Rapidly, news of the strike spread, and that summer a cabin and tent city mushroomed at the site. The camp had no name until October, when a prospector by the name of John Somerville declared it should be named after his home town in Minnesota: Helena.

When Montana Territory was formed in May of 1864, one of its nine original counties was named after the first territorial governor: Edgerton. The territorial legislature, however, in 1867, changed this name to Lewis and Clark to do honor to its original explorers. Helena became the County Seat.

Eight miles southwest of Helena, at the mouth of the Colorado Creek, A.M. Holter started a sawmill in 1865, where the territory's first engine, boiler and planer were located. By October 12, 1867, the telegraph line reached Helena.

The deposits in Helena itself and many rich discoveries on all sides of it encouraged the growth of the young city. By 1867 many permanent stone buildings had been erected, and in the fall of that year a United States land office was opened in the city. On August 1, 1868, the first application for a homestead in the area was made.

Some transportation statistics from the period illustrate that Helena prospered in its early days. The Fort Benton-Helena stage, between May and October of 1866, served 2,500 persons. During one three-day period in 1868, over 700 wagons carried 600 tons of goods to Helena.

In territorial elections in both 1867 and 1869, Helena challenged Virginia City's right to be the capital city; each time the capital remained where it was, though some historians doubt that the ballot count was entirely legitimate in the latter year.

In 1869 the Montana Seminary and the Rocky Mountain Business Institute were opened. When the patent for Helena's townsite was issued in 1870, the appraised value of its buildings was $2 million.

Stockmen from Western Montana, Texas and Kansas, drove their herds into the Helena region in the early 1870's. The first stockmen settled mainly in bottom lands suitable for pasture, where water holes were found and some located in the foothills and stream valleys. At the same time a few squatters began supplying truck and dairy products to the mining camps and military posts. Thus Helena also began serving as an agricultural trade center early in its existence.

By this time the prosperity of the territorial capital, Virginia City, was waning. Helena, however, was flourishing not only as a mining town itself, but as a business center for mining camps on all sides of it. Also a transportation center, Helena was a natural meeting place for all territorial citizens. The city was on the north-south route of steamboat travel, and was just east of the well-traveled Mullan Road.

In 1874, therefore, territorial citizens balloted again to choose between Virginia City and Helena as their capital city. By reversing the votes from some of the counties where the majority had favored Helena, the territorial canvassing board managed once more to give the election to Virginia City. Indignant Helena supporters began a legal battle that was carried to the United States Supreme Court. Finally, they won the right for a recount of the ballots, which gave the election to Helena by a majority of 942. Helena became the capital city on April 19, 1875.

By 1876 Helena's population was 4,000, while the county had 6,000 residents. Leading businessmen of Helena had controlled the town's government until 1881, when the city was incorporated.

Several "modern conveniences" came to the city in the early 1880's. The Brush Electric Light and Power Company, operating at its capacity of 40 lights, illumined Helena's main street in 1882. Telephone exchanges opened in 1883, the same year that the railroad reached the city.

Also in 1883 the Helena Classical School and the Helena Commercial College were opened. The city's capitalists, in 1888, financed the construction of the East Helena smelter.

The territory's citizens, eager for Montana to join the young union as a state, elected delegates to a constitutional convention on July 4, 1889. The delegates met in Helena and drew up a State Constitution, which was overwhelmingly approved by the Territory's voters on October 1st. President Harrison proclaimed Montana to be the 41st state on November 8, 1889.

When the 1890 census was taken, Helena had approximately 14,000 residents. The city's transition from territorial capital to state capital was not automatic; a new election must be held, and other cities were contending for the right to be the Capital. The real contest promised to be between Helena and Anaconda, each of which was supported by one of Butte's rival "copper kings".

Marcus Daly favored Anaconda, the city he had created by building his refining smelter at that site. The man who had headed Montana's constitutional convention, William Clark, was determined to retain Helena as the capital. Neither man hesitated to engage in bizarre and corrupt politics to advance his favorite. Because Deer Lodge, Butte, Bozeman, Great Falls and Boulder were also candidates in an 1892 election, neither side got a majority. Two years later an election victory went to the Clark forces, when Helena became the permanent State capital.

With over 50 millionaires in the 1890's, Helena was known as the richest city per capita in the United States. The city's rich lived in palatial mansions, drove private coaches, and hired full retinues of servants.

The 1893 price decline in silver caused pessimism among some Helena citizens, who moved away from the city. At the State Capitol, however, there was still a government to be run, and political activities kept the town busy.

A St. Louis firm won out over more than forty competitors for the contract to design the State Capitol building, for which the legislature had appropriated a million dollars in 1896. On Independence Day of 1899, the Capitol's cornerstone was laid.

Helena witnessed another bitter political battle between Marcus Daly and William Clark in 1899, after the legislature had selected Clark as one of Montana's two U.S. senators. Daly's forces protested the appointment on the grounds that Clark had used illegal means to win it, and the uproar prompted the United States Senate to investigate the election. Clark hastily resigned his position.

After the turn of the century, various state agencies encouraged the development of Montana's agricultural resources, and much of the area's land was homesteaded and fenced. Because of the relatively small percentage of the land suitable for crop farming, stock raising continued to dominate the agricultural economy of the region.

In 1909 the cornerstone was laid for Mount Saint Charles College; the school's name was changed to Carrol College in 1932.

Hauser and Holter dams were constructed on the Missouri River between 1900 and 1910. Work on this construction, in addition to gold mining at nearby Marysville, caused the area to prosper until the economic slump of 1910. The war period of 1914 to 1918, however, eased the effects of this slump.

During the depression year of 1931, pipe lines from the Cut Bank gas field were extended into Helena, and some 500 men were employed here and in East Helena for almost a year. Other ambitious Helena citizens, during the depression, panned gold in the countryside about the city, earning fair incomes for themselves.

Helena is now the headquarters for many private institutions and Federal district government offices, as well as for the State government. The smelter built at East Helena in 1888 is still one of the area's main industries; the town is in the center of one of Montana's important stock raising industries. With its stable economic and social base, Helena is expected to continue to grow and prosper in coming years.

BOUNDARIES

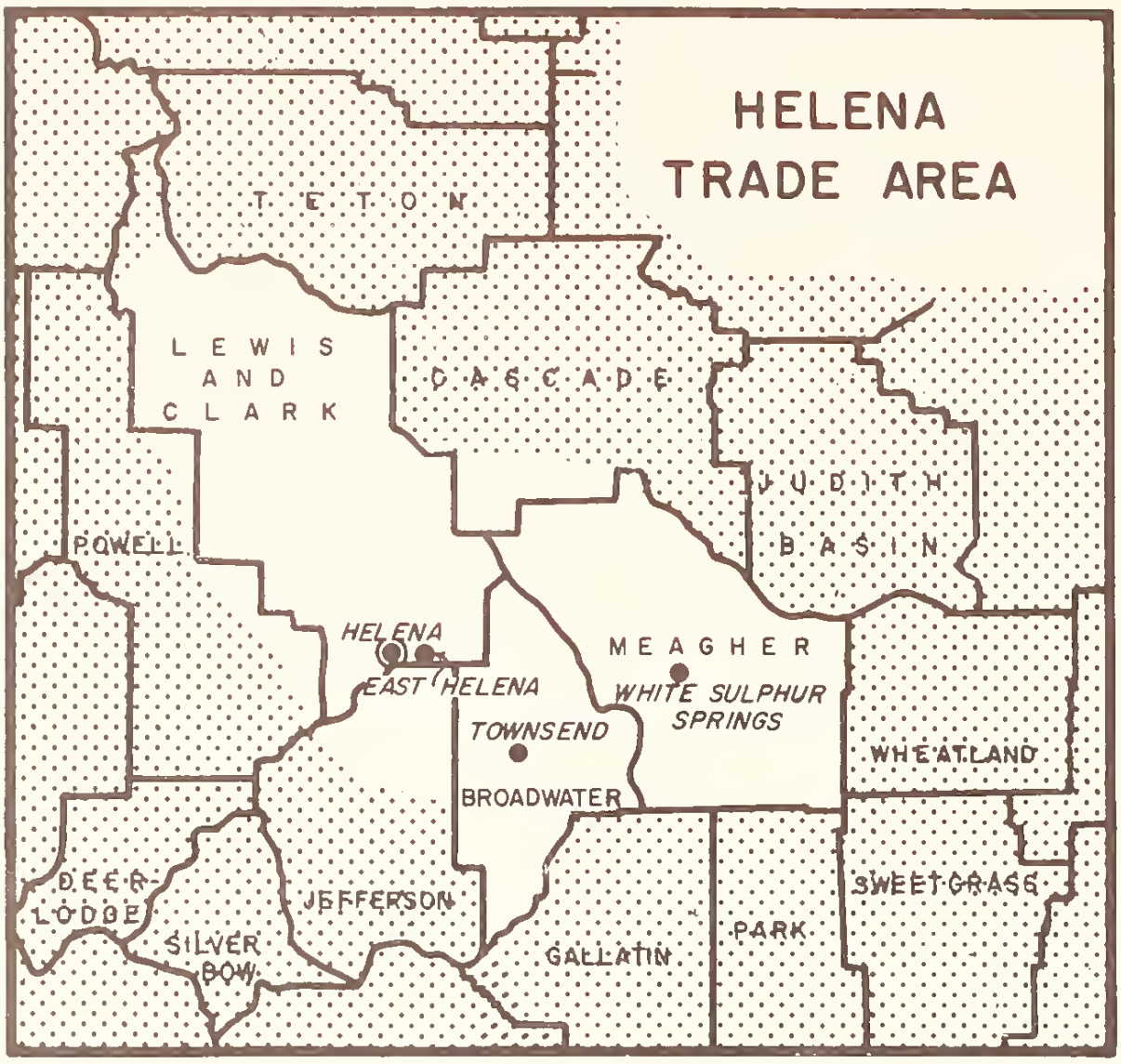
A city with extensive trade and service establishments serves a much larger area than that of the city itself. In order to analyze the present nature and probable future of Helena's urban economy, the city must be considered in terms of the trade area surrounding it. In some respects, the economic influence of Helena extends to the whole state, or to an even larger economic region.

Five Helena wholesalers, for example, reported that they served businesses outside of Montana, and six, or half of those reporting, had regular sales in Montana counties outside of Helena's immediate economic region.

Despite the far-reaching activities of a few of its businesses, however, Helena's economy is most closely connected with a much smaller local area: Lewis and Clark, Broadwater and Meagher counties. All three are served by over half of the reporting Helena wholesalers; they comprise the major circulation region of the Helena Independent Record; and they are roughly outlined when the empirical economic formula known as Reilly's Law of Retail Gravitation* is applied to Helena.

*Reilly's Index of Retail Gravitation is a method of determining whether a neighboring town belongs in the trade area of the city in question or in that of another urban center, assuming each urban center to have a "retail pulling power" directly proportionate to its population size, and inversely proportionate to its distance from the subordinate town.

It should be noted that all three regional criteria indicate that the northern portion of Jefferson County also lies within the Helena sphere of economic dominance. Because it is impossible to systematically isolate economic statistics for an area smaller than a county, however, this area could not be included in this report.



Inspection of the data suggests that this part of Jefferson County represents no more than 5% of the region economically, and it is not believed that its exclusion introduces a serious bias into the data presented.

DESCRIPTION

The three counties in the Helena trade area cover 7,114 square miles, or 4.8% of Montana's total area. The Federal Government, in 1949, owned 2,776 square miles of the land, and Montana possessed 370 square miles. Thus, the national and state governments control approximately 44.5% of the region's land area.

Situated in the western part of central Montana, Lewis and Clark County is about 100 miles long and has a maximum width of 56 miles. The Rocky, Elkhorn, Big Belt and Mission mountains cover a large portion of the

area. The Boulder Batholith, a molten mass which came to rest beneath the surface and cooled into solid rock, extends 60 miles from Butte to Helena. The City of Helena itself is at an altitude of 4,100 feet, and has a temperate climate.

The Continental Divide cuts through Lewis and Clark County; west of this line, the county's streams flow into the Big Blackfoot River, and ultimately into the Pacific Ocean. East of the Divide, the streams join the Missouri River and eventually flow into the Gulf of Mexico.

The Helena National Forest, with a net acreage of 966,613, has its headquarters in Helena. An area of particular scenic and historic appeal is the Gates of the Mountains, fifteen miles north of Helena.

Canyon Ferry Dam on the Missouri River was completed in 1954. Its surface area, in 1954, was 35,200 acres, with 2,043,000 acre feet of usable storage at that time. Operated by the Bureau of Reclamation, the dam is important for flood control, recreation and irrigation purposes. The dam is 220' high with a crest of 1,000 feet, and forms a lake, which is twenty-five miles long and three to six miles wide.

When the 1950 census was taken, the total trade area population was 29,541. Since that time the population has increased 12%, until the 1960 count in the three counties was 33,101.

In 1960, 20,090 persons resided within the City of Helena; this preliminary census count indicates a 14.3% gain over 1950. From 1940 to 1950, the city's population increased nearly 17%. Helena has a City-Manager form of government, with a mayor and five commissioners elected by the populace.

Helena's business conditions are on a substantial basis; it is served by three banks, and by two building and loan companies. The State Office of the Mountain States Telephone and Telegraph Company is located here, as are the headquarters for Eddy's Bakeries, whose services extend to several western states.

Gold, lead, silver, zinc and copper have been the most produced minerals in the Helena trade area. Deposits of such minerals as iron ore, limestone, gypsum, coal, diatomaceous earth sapphires, and talc are found in the three counties. Only seventeen mining properties were in development or production stages in 1959.

Two plants for the primary smelting and refining of non-ferrous metals are located in East Helena. The American Smelting and Refining Company manufactures lead bullion, copper speiss, and copper matte. The Anaconda Company treats hot and cold slag to recover zinc oxide.

The assessed value of all tri-county property was $105,186,000 in 1955-56. Lewis and Clark County accounted for 74% of this total. Although Lewis and Clark County is only 14th in size of all Montana counties, only five others had higher assessed valuations. Many of its citizens claim that Helena is still the richest city per capita in the United States, as it was in the 1890's.

Helena is the administrative center of Montana for both the State and National governments as it is the capital of Montana and the county seat of Lewis and Clark County. Several agencies of the United States Government have their Montana headquarters in Helena. A branch of the Federal Reserve District Bank of Minneapolis was opened in the city on February 1, 1921 and this location of a branch in Helena emphasizes the importance of the city in the State's economic life. In addition, both the Episcopal and the Roman Catholic churches have their administrative centers here.

Helena is served by the Northern Pacific railroad, which provides passenger service East and West, and the Great Northern, which travels north and south. U. S. Highways 12 and 91 and Montana Highway 287, are routed through the city. Both the Northwestern Airlines and the Western Airlines serve Helena.

Other important communities in the three counties are East Helena, Townsend and White Sulphur Springs.

E C O N O M Y

LABOR

Labor Force by Type of Industry

Agriculture

Of the three basic economic activities (mining, agriculture, and manufacturing), agriculture is the largest single employer in the Helena economic region, as it is in the state generally. Agricultural employment in the tradé area in 1950 accounted for 15.3% of all reported employment, compared with 25.6% for the state generally. However, agricultural employment in the region is declining more rapidly than in the state; in the region it declined from 22.3% in 1940 to 15.3% in 1950, compared with 32.4% and 25.6% for the State.

Over 52% of all agricultural employment in the region is outside Lewis and Clark County. In Broadwater and Meagher counties, agriculture is the largest single employer of all economic activities, accounting for 44.9% of all reported employment in Broadwater in 1950 and 57.1% in Meagher. The proportion of employed persons engaged in agriculture actually increased in Broadwater County from 1940 to 1950, growing from 38.3% to 44.9%. The proportion declined in Lewis and Clark County, from 13.9% to 8.7%, and in Meagher County from 67.3% to 57.1%.

Mining

Mining as a source of employment has declined generally over the State, from 7.4% of the total reported employment in 1940 to 4.3% in 1950. However, the relative decline in the Helena region has been even greater. In the three-county area, mining accounted for 7.6% of reported employment in 1940, but by 1950 this source of employment had declined to 1.8%.

Mining was an unimportant employer in all three counties in 1950, though it had figured significantly in the Broadwater labor market in 1940. Mining employment in Broadwater County declined from 37.8% in 1940 to 3.3% in 1950. In Lewis and Clark County the decrease was from 6.5% in 1940 to 1.6% in 1950; in Meagher, from 1.6% to 0.8%. However, information released by the Unemploy-

ment Compensation Commission of Montana indicates that 183 persons were employed in 1957 in mining in the three counties. This figure changed to 109 one year later, and in 1959 only 21 persons were so employed. The number of those employed in mining in Lewis and Clark County in these years has comprised about 90% of the region's total in both 1957 and 1958, and about 70% in 1959.

Manufacturing

Although manufacturing employment was almost twice as great in the State as it was in the Helena economic area in 1940, this type of employment more than doubled in the region during the 1940-1950 decade, while the state increase was moderate. Manufacturing employment in the region increased from 4.0% of the total reported employment to 8.4%, compared with an increase from 7.5% to 8.6% for the State.

The greatest proportionate increase in the region took place in Meagher County, where manufacturing employment increased from 0.8% of total reported employment to 6.1%, but significant gains were also made in Lewis and Clark County, where manufacturing increased from 4.8% to 9.1%. The increase in Broadwater County (1.8% to 3.7%) was moderate.

In the three-year period beginning in 1957, the number of persons under covered employment in manufacturing in Lewis and Clark County has, according to the Unemployment Compensation Commission, increased each year. Within this period, over 250 persons have been added to those so employed. Moreover, within the economic area, between eighty and ninety per cent of those employed in manufacturing have worked in Lewis and Clark County.

Retail

In the Helena economic region in 1950, retail activities claimed a smaller proportion of total employment than it did in the State, and was relatively stable in the region from 1940 to 1950, compared with a significant increase over the State as a whole. While retail employment in the area increased from 15.2% to 15.8% during the decade, the increase for the State was from 13.8% to 16.4%.

Retail employment in Lewis and Clark County actually declined slightly, from 17.3% to 16.7% of total reported employment, while Broadwater increased from 8.4% to 12.1% and Meagher increased from 7.9% to 10.4%. These increases had little effect on the regional trend, however, since almost 90% of the retail employees in the area reside in Lewis and Clark County. This is a reflection of the retail dominance of the Helena urban area over the region.

In 1959 over 300 retail establishments in Helena employed 1,375 persons, with an annual payroll approaching $3,500,000.

Wholesale

Wholesaling is a considerably less important activity in the Helena area than it is in the State, but it increased more rapidly in the trade area during the 1940-1950 decade. In the area, wholesaling accounted for only 1.0% of reported employment in 1940, increasing to 1.7% in 1950. Wholesaling in the State represented 2.3% of employment in 1940, 2.9% in 1950.

Again, dominance of the area by Lewis and Clark County is revealed in the distribution of wholesaling employment in the region, 91% of which was in Lewis and Clark County. Even there, however, it accounted for only 1.9% of reported employment in 1950, compared with 1.2% in 1940. In Broadwater County 1.3% of reported employment in 1950 was engaged in wholesaling, 0.6% in Meagher County; wholesaling employment in both counties was negligible in 1940.

There were forty wholesale establishments in Helena in 1959 employing over 285.

Transportation

There was a moderate increase in both the number and proportion of persons employed in transportation in the area between 1940 and 1950, though the area still lagged behind the State in the relative importance of this economic activity. In the trade area this activity accounted for 5.3% of reported employment in 1950, compared with 4.3% in 1940. In the State, transportation employment increased during the same period from 6.3% to 8.1%. At both the beginning and end of the decade about 84% of the regional transportation employment was located in Lewis and Clark County.

According to one source the railroads employed 235 persons in Lewis and Clark County in 1960, with the vast majority of these residing in Helena. Annual payment in the County for both railroads was about $1,000,000.

Construction

In 1950, 9.5% of the reported employment in the Helena trade area was engaged in construction work. This was considerably greater than the State, where only 6.8% were so employed. This was a significant increase in both areas over 1940, when 7.1% of regional employment was occupied with construction, compared with 4.9% in the State. In the trade area in 1950, only 11% of the construction workers were located outside Lewis and Clark County.

Services

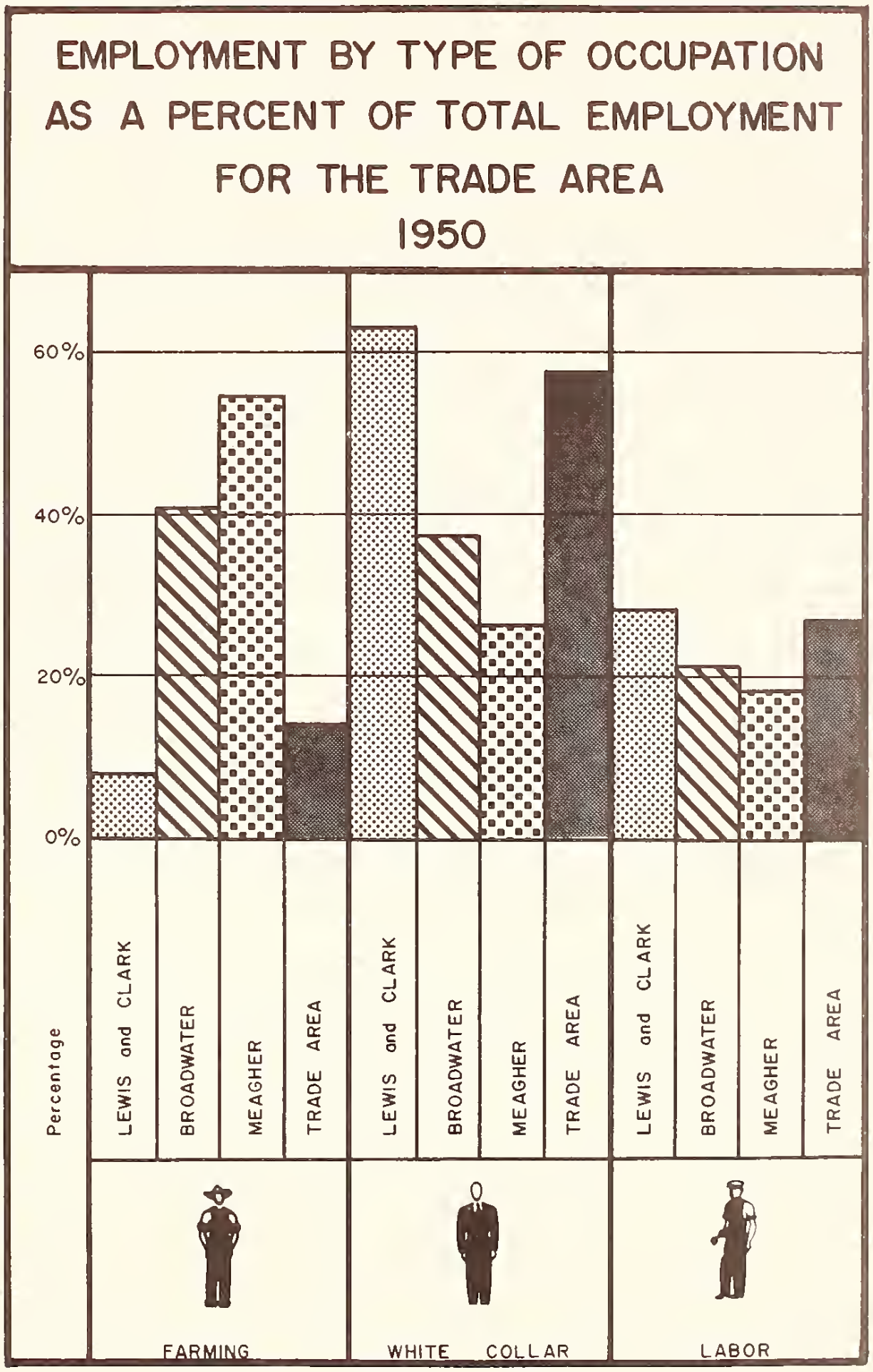
The largest single employer in the region, as in the State in 1950, was the service trades. The proportion of reported employment engaged in service activities increased from 1940 to 1950 in both the State and all of the Helena economic trade area except for Meagher County, but the proportion was considerably larger in the region than in Montana generally. Forty-two per cent of the regional employment was engaged in service activities in 1950, compared with 38.4% in 1940, and compared with comparable percentages for the State of 25.4 and 27.1. Most of the regional service employment was in Lewis and Clark County (93%), but service activities accounted for one-fifth of employment in Broadwater County in 1950 and nearly 15% in Meagher County. The role of service activities in the Helena economy will be examined in greater detail below.

Labor Force by Type of Occupation

An examination of 1950 Census data on employment by types of occupation in the Helena economic trade area reveals that the largest proportion of employees were engaged in clerical occupations. Over 18% were so employed in the trade area, while nearly twenty-one per cent were employed in clerical occupations in Lewis and Clark County. The next most important occupation in the trade area, in terms of employment, was farm work, accounting for 14.4% of reported occupations. Ranking next, with approximately equal percentages, were the

professional, craftsmen, service, operative, and managerial occupations, in that order, ranging from twelve to ten per cent of the reported occupations. Sales, with 6.1%, and non-farm labor, with 5.3%, ranked lowest.

Of these occupations, the white collar occupations (including sales, service, professional, managerial, and clerical) accounted for the majority of the reported employment, 58% in the trade area and 63% in Lewis and Clark County. Skilled and unskilled labor (including craftsmen, operatives, and non-farm labor) accounted for 28% of the reported occupations; farming, for 14%.



In the individual counties, these occupational classes differ widely. In Lewis and Clark County there were eight times as many people in white collar occupations as in farming (63.3% and 8.0%), while in Meagher County there were twice as many in farming as in white collar occupations (54.7% and 26.7%), and in Broadwater County the two classes were equal (37.6%) white collar, (40.8%) farming. Lewis and Clark County had the largest proportion of employment in non-farm labor (28.6%), while approximately one-fifth of the occupations in Broadwater and Meagher counties were reported as non-farm labor.

AGRICULTURE

Extent

In the three counties which constitute the Helena economic area over half of the land area was devoted to agriculture in 1954. In Broadwater County, the smallest of the three, 70% of the land area was in ranches or farms, while the percentages for Lewis and Clark and Meagher counties were 50.3 and 52.4, respectively. Over the trade area as a whole, 54.7% of the land was in farms, compared with 65.8% in the State.

In 1954, 11.1% of the agricultural land in the three counties was devoted to crops. Percentages in individual counties varied from 16% in Broadwater County to 9% each in Lewis and Clark and Meagher counties. The greatest percentage of tri-county agricultural land is in ranches.

Size of Farm

Paralleling a similar State trend, the average number of acres per farm in the trade area has been steadily increasing throughout the last several decades. Because of the emphasis on ranching in the trade area's agricultural economy, however, the average size of farms in each of the three counties greatly exceeds the State average. While the Montana figure was 1,111 acres in 1954, that for Broadwater County was 2,590 acres; for Meagher County it was 5,094 acres, and for Lewis and Clark County, 2,930 acres. On the other hand there were fewer acres of cropland per farm in trade area counties than in the State as a whole.

Between 1950 and 1954, the average value of farms and buildings increased markedly. In Meagher County the average value increased from $48,600 to $77,000; in Broadwater County, from $36,400 to $55,400; and in Lewis and Clark County, from $36,000 to $53,000. These changes reflect a nation-wide trend toward a consolidation of agricultural land holdings.

Irrigation

A development of some consequence for the agricultural economy of the Helena trade area is the Helena Valley Project of the U.S. Bureau of Reclamation, which has resulted in the creation of the Helena Valley Irrigation District, one of many Missouri River Basin projects built under the Federal Flood Control Act of 1944.

Part of the area now under irrigation had been served with irrigation water from Lake Helena since 1912 by means of a pump system operated by the Montana Power Company from 1912 to 1945, and thereafter by the State of Montana. At its peak in 1932 the system served 10,300 agricultural acres, but the average acreage from 1912 to 1945 was 7,700 and after 1946 the acreage dropped to about 3,200 as a result of the deterioration of pumps and other equipment.

Under the provisions of the charter of the Helena Valley Irrigation District, agricultural lands will be served with irrigation water from the Canyon Ferry Dam and Reservoir. From the Canyon Ferry Reservoir the irrigation water travels to the Helena Valley through the Spokane Hills via a 2.7 mile tunnel with a capacity of 300 cubic feet per second and is delivered by a 32-mile canal and a network of 58 miles of laterals and sublaterals. The tunnel was placed in operation on April 1, 1959. The Irrigation District, organized on June 28, 1955, embraced 14,130 acres of irrigable land by 1959, and would eventually include 17,631 acres, agricultural land that would otherwise have reverted to dry farming and range land.

Arrangements have also been made under this reclamation project to supplement the municipal water supply of the City of Helena. An agreement entered into by the City and the Federal Government in August, 1956, authorizes the city to purchase not fewer than 600 nor more than 5,680 acre feet of water per year for forty years.

When the 1954 Census of Agriculture was taken, Broadwater County had 5.4% of its farm land irrigated, while Meagher County had 4.8% of the land irrigated, and Lewis and Clark County had 2.6%. Over 37% of the cropland in the trade area was irrigated in 1954, compared with 40.7% in the State generally. Figures for individual counties varied from 54.3% in Meagher County to 28.4% for Lewis and Clark County; Broadwater County had 32.9% of its cropland irrigated.

Major Agricultural Products

Livestock

The 118,900 cattle on trade area ranches in 1958 represented 4.8% of Montana's total. This stock was distributed among the three counties according to the following approximate percentages: 25% in Broadwater County, 33% in Lewis and Clark County and 42% in Meagher County.

Although four years earlier about 5% of the stock sheep and lambs in Montana were in the trade area, by 1958 the percentage had declined to 3.5%. Meagher County had over half, or 56%, of the total 79,900 sheep in the three counties, while Broadwater County had only 12%.

Of the 3,700 hogs in the area in 1958, Lewis and Clark County claimed 70%; Broadwater County had 16.2%; and Meagher County, 13.5%. In addition, 43,600 of the State's chickens were in the Helena trade area, representing 2.9% of Montana's total.

Crops

Of all crops produced in the trade area in 1957, hay had the greatest value ($2,946,500), with the production in the three counties of 175,000 tons representing 5.8% of the total State crop. Second in dollar value was winter wheat, valued at $988,900 in 1957, though this tri-county production constituted barely more than 1% of the State total. Production of 323,000 bushels of spring wheat (other than Durum) contributed another $637,900 to the area's economy, but again represented less than 2% of the total State production.

Four other crops were worth more than $100,000 to the trade area in 1957. Grown mainly in Lewis and Clark and Broadwater counties, 573,000 bushels of barley were valued at $420,000, and represented less than 2% of the State crop; 8.2% of the State potato crop was grown in the same two counties, and had a value of $342,400 to the area's economy. 12,570 tons of sugar beets, or 1.5% of the State crop, were grown in Lewis and Clark and Broadwater counties in 1957, contributing $158,000 to the agricultural economy of the trade area; oat production in the three counties amounted to 271,700 bushels, representing 2.8% of Montana's total, with a value of $137,500.

Cash Receipts

Trade area marketing receipts represented almost 3% of the total in 1957. Receipts from livestock and livestock products in the three counties made up 4.6% of all those in the State, while crops accounted for only 1.4% of the Montana total. Cash receipts from irrigated cropland in the trade area, however, made up 5.7% of the similar State figure.

In 1957, cash receipts from farm marketings in the trade area totaled $11,786,300; livestock and livestock products accounted for nearly 78% of this amount. In all of Montana that year, receipts from livestock and those from crops were approximately the same.

FARM MARKETING RECEIPTS
Helena Trade Area--1957

	Cash Rec.	Montana Total
Crops	$ 2,729,100	1.4%
Livestock	$ 9,057,200	4.6%
All Agricultural Products	$11,786,300	3%

As a source of income, crops were more important in Broadwater County than in the rest of the trade area, although even here the highest proportion (57%) of marketing receipts came from livestock. Meagher County, on the other hand, depended on crops for only 6% and on livestock for 94% of its marketing income.

Cash receipts per farm in 1957 averaged $11,900 in Montana. In Lewis and Clark County the average was

$11,530; in Broadwater County it was $16,030; and in Meagher County, $24,654. Of the trade area's total cash receipts, approximately 38% came from Lewis and Clark County, 32% from Meagher County, and 30% from Broadwater County.

BUSINESS SURVEY

Retail

Retail sales in the Helena economic region in 1954 amounted to $36,734,000, or 4.7% of the total receipts from sales in Montana. This represented an increase for the trade area over the $30,008,000 figure for 1948, but the increase was not relatively as great as that in the State. Tri-county retail sales in 1948 amounted to 5.0% of the State total.

Lewis and Clark County accounted for a sum of over $32,000,000 in retail sales in 1954, representing 87% of the area's total. This was a slight increase over 1948, when the county claimed 86% of the area's retail sales.

DISTRIBUTION OF RETAIL SALES
Helena Trade Area

	1948	1954	1958	% Change 1954-1958
Lewis & Clark	86.4%	87.5%	87.9%	15.5%
Broadwater	8.9%	7.2%	5.9%	-5.1%
Meagher	4.7%	5.2%	6.1%	32.4%
Trade Area (Percentage of State)	5.0%	4.7%	5.1%	14.9%

Source: U.S. Bureau of the Census, 1948, 1954, and 1958 Census of Business

Preliminary reports of the 1958 Census of Business reveal an increased concentration of retail sales in Lewis and Clark County. From 1954 to 1958 retail sales in the trade area increased from $36.7 million to $42.2 million. During the same period retail sales in Lewis and Clark County increased 15.5%. Sales in Broadwater County declined 5.1%, from 7.2% of the area's total to

5.9%. The greatest relative increase occurred in Meagher County, where retail sales accounted for 6.1% of the area in 1958 compared with 5.2% in 1954.

Moreover, a decrease in 1958, when compared with 1954, can be noted in the number of retail establishments in each of the three counties. In Lewis and Clark County, food stores showed the greatest numerical decrease of all the Census categories of retail establishments. Tri-county sales increased more rapidly than the State total, representing 5.1% of the State sales in 1958 compared with 4.7% in 1954.

Wholesale

Sales in wholesaling in Lewis and Clark and Broadwater Counties in 1954 totaled over $16,764,000 (Meagher County was not reported, to avoid disclosing the operations of a single industry.) Wholesale sales in the State for the same year amounted to $698,595,000. The trade area accounted for 2.4% of this total. Lewis and Clark County contributed 87% to the area's wholesale sales in 1948, (the comparable figure for 1954 is not available), indicating the dominance of the county over the trade area in wholesaling activities. From 1948-1954 the area gained in relative importance in wholesaling, increasing from 1.9% of the total Montana wholesale sales to more than 2.4%. This figure was again increased to 2.8% by 1958.

In 1954 Lewis and Clark County ranked ninth in Montana in terms of sales of wholesale establishments. By 1958 Lewis and Clark County had advanced to seventh place on a statewide basis, having passed both Fergus and Gallatin counties. By the latter year approximately 94% of the area's total wholesale trade was centered in Lewis and Clark County.

Services

Receipts from services totaled $3,391,000 in 1954 in the region, or 5.2% of the State total. This represented a relative decline over 1948, when 5.5% of the total state-wide receipts from services was claimed by the area. Although the trade area's service receipts increased considerably in this period, the State's receipts almost tripled.

Though Lewis and Clark County dominated the trade area in receipts from service establishments in both 1954 and 1958, it too declined in relative position. In 1948 service receipts in the county amounted to 93% of the area's receipts, compared with 89% in 1954. Service receipts in both Broadwater and Meagher counties quadrupled during the four years, increasing in Broadwater County from $65,000 to $252,000, and from $27,000 to $110,000 in Meagher County. Service receipts in Lewis and Clark County increased 150% during the same period.

DISTRIBUTION OF SELECTED SERVICE RECEIPTS
Helena Trade Area

	1948	1954	1958	% Change 1954-1958
Lewis & Clark	92.9%	89.3%	87.5%	14.2%
Broadwater	4.9%	7.4%	6.7%	5.2%
Meagher	2.1%	3.2%	5.7%	106.4%
Trade Area (Percentage of State)	5.5%	5.2%	4.9%	16.5%

Source: U.S. Bureau of the Census, 1948, 1954, and 1958 Census of Business.

The 1958 Census of Business reveals that receipts from services increased less in the trade area than in the State from 1954 to 1958. Whereas tri-county receipts represented 5.2% of the State total in 1954, they represented 4.9% in 1958. Of the three counties in the Helena trade area the greatest percentage increase was in Meagher County. Service receipts here increased from 3.2% of the area's total in 1954 to 5.7% in 1958, while Lewis and Clark declined from 89.3% to 87.5%, and Broadwater from 7.4% to 6.7%.

Manufacturing

In the Helena economic region in 1954 the value added by manufacture totaled $6,709,000, or 4.8% of the value added by manufacturing in the State of Montana. Comparable figures are not available for the trade area in 1948.

Lewis and Clark County in 1954 contributed 96% of the value added by manufacture in the trade area or $6,437,000; this represented an increase for the county of $1,736,000, or 37% over 1948. The manufacturing contribution of Broadwater County in 1954 amounted to $104,000; in Meagher County it was $168,000.

PURCHASING POWER

Another aspect of the economy that must be considered is the monetary ability of the population to purchase the goods and services available.

An explanation of two basic concepts is necessary. The term "household" refers to any dwelling unit that is occupied by a family or a single person unless the latter resides in a rooming house, college dormitory, hotel, military barracks, or institutions. The term "consumer spending unit" includes all households plus income-earning students, soldiers or residents of boarding houses, hotels, and other institutions.

Household Income

According to Sales Management, 1958, the three counties in the Helena Trade area totaled 11,700 households. Approximately 8,700 or about 74% are situated in Helena. Only Great Falls, Billings and Butte exceeded Helena in the number of households.

The cash income per household in Helena amounted to $5,347. Helena was thus slightly higher than the average figure for fourteen of Montana's cities and about $400 higher than the average for the entire State.

A breakdown of the number of households by income bracket and the percentage of the households within those income brackets follows:

	Helena		Trade Area		Montana	
	% House Holds	% Income	% House Holds	% Income	% House Holds	% Income
0-2499	20.2	5.5	26.9	8.7	24.1	7.1
2500-3999	19.2	11.1	25.6	17.6	22.0	13.8
4000-6999	38.8	37.6	31.5	34.6	36.4	38.2
7000-9999	14.5	21.3	9.6	16.1	11.2	17.9
10,000-over	7.3	24.5	6.2	23.1	6.3	23.0

Helena had a smaller percentage of its households in the two lower brackets than either the region or the State while its percentage of households in the remaining brackets exceeds the percentages for both the area and the State. Helena had 60.6% of its households earning $4,000 or over, compared with 47.3% for the region and 53.9% for Montana, and about 83% of the city's income was earned by those in these income brackets. In the three county region 74% of the total income was received by 47.3 of the households. For Montana 53.9% of the households earned 79% of the state's income.

Consumer Spending Units

Helena had 9,300 consumer spending units or about 75% of the units in the trade area. Each of the Cities of Great Falls, Billings, Butte and Missoula had over 11,000.

The consumer spending units in Montana averaged about $5,055. Helena's income per consumer spending unit was $5,350. Only Havre with $5,519, Billings with $5,506 and Great Falls with $5,415, had higher incomes. Helena exceeded the Montana average for fourteen of the larger cities.

INSTITUTIONAL SERVICES

There are five hospitals in the Helena area, including the Montana's Children's Home and Hospital for children and the Veterans Administration Hospital at Fort Harrison. The five have a combined total of over 400 beds and approximately 100 resident physicians. In 1958 the hospitals admitted nearly 6,000 bed patients and over 7,000 outpatients, and had budgets totaling over $3,000,000. Nursing training is available through the Sisters of Charity, (Leavenworth, Kansas) Nursing School, which is affiliated with Carroll College.

The Veterans Center at Fort Harrison, in addition to providing medical and dental care, assists veterans with their problems regarding disability compensation, pensions, education and vocational training.

Carroll College, a liberal arts college maintained by the Roman Catholic Diocese of Helena, is the city's higher educational facility. The expected 1960 enrollment was about 700; the college has announced the construction of additional facilities.

The Helena Public Library, the State Historical Library, and Carroll College Library have excellent facilities.

In or near Helena are such private institutions as the Good Shepherd Convent, St. Joseph's Orphanage, the Deaconness Home, Montana Masonic Home, Montana IOOF Home, the Florence Crittendon Home and the previously mentioned Montana Children's Home. The State of Montana maintains the State Vocational School for Girls.

The half-million dollar Charles Russell collection is in the Pioneer Memorial Building, which houses the State Historical Library and Museum. Also situated in Helena is the State Capitol Building complex. A new structure is currently under construction to house the Montana State Unemployment Commission.

St. Helena's Cathedral, famous for its gothic style and stained-glass windows, is perhaps the most impressive structure between Minneapolis-St. Paul and Seattle.

The Holter Research Foundation, established in 1947 by Norman J. Holter, does pure and applied scientific research on a non-profit, non-commercial basis. The Foundation, presently housed in the old Great Northern Railway building, has devoted much time and effort to studies of heart behaviour and to the characteristics of a water drop when subjected to high frequency vibrations. Personnel have developed mechanisms for use in heart research and devices for radiation detection. Among the numerous research papers published by the Foundation is one concerning theoretical information detecting atomic tests on a world-wide basis, which has been proven workable; the University of Chicago is continuing the Foundation's research in this field.

The Archie Bray Foundation, providing courses in the making of pottery, was opened in Helena in 1951. It contains a museum of ceramic art.

TOURISM AND RECREATION

Two major highway routes channel into the valley much tourist traffic for whom the scenery is the primary attraction.

A recent Montana tourist survey indicates that Helena is among a group of cities and areas enjoying a traffic stream of between 20 and 30 percent of the State's visitors. Approximately 22.2 percent of tourist parties in Montana passed through Helena in 1958. This made the Capital the nineteenth ranking tourist city, well behind such places as East Glacier, Missoula, Great Falls, Kalispell, Billings, Livingston and Laurel. The Helena Chamber of Commerce estimates that each tourist spends $4.63 in the city.

Of 158 campgrounds in the national forests situated in Montana, only six are in the Helena National Forest. Of the eleven national forests, only two had fewer campgrounds. Camping sites in the Helena National Forest numbered 64, or approximately 6.6% of the 977 available in the State.

The Gates of the Mountains, north of Helena, draws many visitors each year for the sightseeing trip along the Missouri River. It is reported that the Charles M. Russell Room, in the Pioneer Memorial Building, attracts some 200,000 visitors each year.

Helena's location, near mountains, forests and rivers, makes it an attractive recreational and resort area. Forest Service officials have said that Lewis and Clark County has a wider variety of game than any other county in the entire United States. Within the Helena and Lincoln Working Circle of the Helena National Forest are large deer and elk populations. Approximately 200 miles of fishing streams and seven lakes offering fine fishing opportunities are within the Helena Circle. The Lincoln Working Circle has 279 miles of fishing stream and 15 lakes. The fishing potential for both Working Circles is rated from average to excellent.

Water sports and winter skiing are possible on the various lakes and dams of the Missouri River close to Helena.

During 1959 over 200 conventions and special events were held in Helena, attracting more than 25,000 persons In the same year, over 5,200 school children visited Montana's capital city.

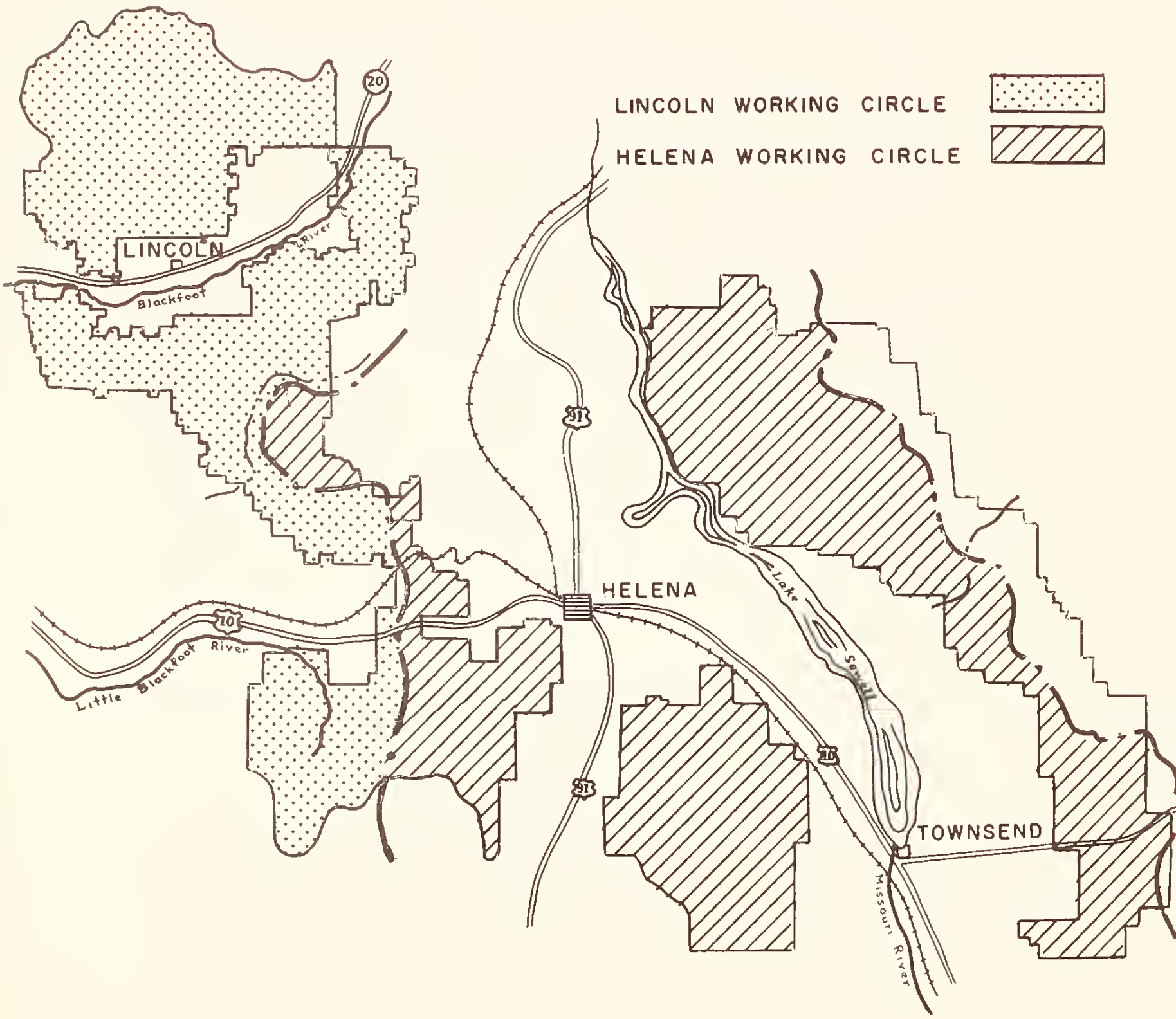
The 1959 Legislative Assembly brought to Helena over a thousand people, directly or indirectly participating in the legislative session.

NATURAL RESOURCES

Forest Reserves

The Helena National Forest was proclaimed during the administration of President Taft, but the present boundaries of the Helena National Forest were determined in 1940.

Lincoln and Helena Working Circles
HELENA NATIONAL FOREST



A Working Circle may be defined as, "a management plan unit; it is a major territorial division of a forest in which the conditions affecting the care and use of the timber crop are so inter-related that the area can and should be managed as a whole and under a single plan, and usually though not invariably under sustained yield".*

The Helena Working Circle

The Helena Working Circle of the Helena National Forest embraces the area located in three range districts in the Upper Missouri River drainage of the Helena National Forest. It includes portions of Broadwater, Lewis and Clark, and Jefferson Counties. This Circle has an area of almost 500,000 acres with slightly less than 300,000 acres of non-reserved national forest commercial forest land. Douglas fir, lodgepole pine and ponderosa pine are the predominant types of wood in the Helena Working Circle. The timber resources of this working circle are relatively undeveloped.

On the north and northwest the Lincoln Working Circle bounds the Helena Working Circle; the Big Belts Block limit it on the east, and the Deer Lodge Working Circle of the Deer Lodge National Forest contain it on the south.

In early 1960 there were 24 small circular sawmills within the entire working circle, which includes the important communities of Helena, East Helena and Townsend. A good market for timber exists at Townsend with little demand or competition in Helena. Townsend now has facilities to process 9 M.b.m. yearly and Helena about 2 MM yearly, mostly from small portable sawmills.

A rather high percentage of young timber stands is prevalent, signifying that less than 33% of the area is over rotation age. This working circle, although somewhat marginal from its timber producing capabilities alone, has an important amount of growing stock available for use.

Water from the Helena Working Circle supplies the local municipal water for Townsend, East Helena and Helena.

*Source: Management Plans, U.S. Dept. of Agriculture, U.S. Government Printing Office

The importance of fire protection in the Helena Working Circle must be emphasized because of the dryness of the summer season, the steep topography, and the frequent winds.

The Lincoln Working Circle

Concerned with 375,000 acres of Commercial national forest land, in a total national forest area of 420,000 acres, the Lincoln Working Circle includes all of the Lincoln Ranger District and part of the Helena Ranger District. Douglas fir and lodgepole pine are the chief forest types.

Market demand is minor for products other than sawtimber which together with pole sizes is predominant in the present working circle. Mills consume about 7 MM of sawtimber per year. The possibility of a pulpwood market and higher future lumber values enhances the timber marketability.

There are ten small circular sawmills within the Lincoln Block at present. The exhaustion of timber on private lands will ultimately cause shifting to National Forest timber. Processing of timber will offer about three times the present employment when Lincoln Block reaches its fully permissable cut. The development of a processing plant in the Elliston-Avon area is possible as timber is utilized.

There have been no exceptionally large fires in the Lincoln Working Circle during the past fifty years.

Sales Policies of Working Circles

It is the policy within both working circles to sell full allowable annual cut of all forest species, as markets and finances for sale preparation, administration and roads allow. The need to sell sufficient timber to amortize the access roads, the selling of national logging channels as one unit, and the need to keep sales to a size which would insure competition, determines the size of timber sales in both circles. The publication of the volume of allowable cut in the Helena Circle may attract processing plants to the area. Large offerings of lodgepole pine may be necessary in the Lincoln Circle to establish a processing plant using lodgepole.

Economic Possibilities

In the Timber Management Plan of the Helena Working Circle, Helena National Forest - the Forest Service expresses a hope that a sawmill with an annual capacity of 10 MM b m plus will be established in Helena in the near future. It is stated that East Helena, Townsend, and particularly the Helena area, will develop more forest industry when timber from the working circle is placed on the market. Employment should increase as the full allowable cut is attained by the Helena Working Circle. Publicizing the volume of allowable cut in this Circle may bring processing plants, thus a more stable lumbering industry should result. The well-planned development of national forest timber should also assist the stability of Lincoln's lumbering activity.

Mineral Production

Gold, lead, silver and zinc were produced in each of the three counties in the Helena economic area in 1958. In addition, iron ore, copper, stone, sand and gravel were produced in Broadwater County in 1958; sand and gravel were produced in Lewis and Clark County, and copper was mined in Meagher County.

Value of mineral production in Broadwater County in 1958 totaled $130,000, a slight increase from the $129,493 production in 1957. Production in Meagher County in 1958 was withheld, but was valued at $8,662 in 1957, a sharp drop from the 1956 figure of $44,904. Comparable figures for total mineral production in Lewis and Clark County are not available, although total production in 1958 was set at $1,517,000.

It is reported, however, that the value of production of five minerals--gold, silver, copper, lead and zinc--amounted to $1,478,045 in the area in 1957; of this, Lewis and Clark County accounted for the sum of $1,434,900, Meagher County for $8,662, and Broadwater County for $35,483.

According to the Minerals Yearbook, 1958, nearly 10,000 tons of magnetite were produced near Radersburg in Broadwater County that year, and were sent to Trident for use in making cement. A small tonnage of oxide manganese was shipped to the stockpile at Butte.

Crude manganiferous ore was shipped from Meagher County to the Butte stockpile. Manganese oxide is being developed in the Maxine District of Meagher County.

The Directory of Known Mining Enterprises, 1959, released by the Montana Bureau of Mines and Geology, listed eight developing and/or producing mines in Broadwater County, four in Meagher County and five in Lewis and Clark County.

Since 1900, mining activity in Meagher County has tended to be only intermittent at a few small-scale leasing operations on dumps and in shallow workings. Between 1883 and 1947 this county produced minerals with a total value of $6,044,511. Most of the production during that time was in silver, gold, and lead.

Limestone occurs in Meagher County. A lime kiln was operated about fifty years ago but lime production has not occurred in recent years. A large deposit of gypsum is situated about forty miles from White Sulphur Springs in the northwestern part of the county. It has been reported that there are over one-half million tons of bituminous coal in the county.

One of the outstanding Montana gold discoveries was made at Confederate Gulch in 1864. Beginning about 1880 open-pit mining of magnetite occurred in Broadwater County, with the ore serving as smelter flux.

The value of lode and placer gold recovered during the period 1901 to 1908 amounted to $9,341,000. Between 1901 and 1948 almost 21,000,000 pounds of lead, over 350,000 ounces of gold, 7,000,000 pounds of copper, 1,300,000 ounces of silver and 5,000,000 pounds of zinc have been produced.

However, most of the mining operations in Broadwater County, according to a United States Bureau of Mines Information Circular dated April, 1957, have been short-lived. Small-scale operations and several prospecting ventures have characterized the county's mining activity.

Diatomaceous earth, which is commercially used as a heat insulator in fireproof cement, scouring powder, and filters, is found at three places in Montana. Two deposits are in Broadwater County, one five miles northeast of Winston and the other about five miles southeast

of Townsend. The latter deposit, a bed about ten feet thick, may be of some future commercial value, but since too little development work has taken place, neither quality nor quantity is known now. An occurance of manganese has been noted east of White Sulphur Springs, and bismuth has been reported in minerals found at White Sulphur Springs.

Meagher limestone, mined in small quantities from the Limestone Hills between Townsend and Radersburg, is sold primarily as a decorative building stone. Small quantities of coal mined from tertiary beds near Toston have been used locally. Low-grade uranium deposits may occur in tertiary rocks, particularly near the northern boundary and in the southwest part of the area in Indian Creek placer area. Deposits of impure bendonite have not been exploited.

The Last Chance placer gold deposit in Lewis and Clark County yielded about $16,000,000 before 1868. Ores mined about 1928 in the area south of Helena had an approximate total value of $130,000,000. Placer deposits have been worked intermittently since World War I in Prickly Pear and Silver creeks, and in Holmes Gulch gravels, at the lower end of Last Chance Gulch, were dredged beginning in the latter part of 1935. Between 1935 and 1945, fine gold amounting to $2,500,000 was produced.

Various minerals have been found in different parts of Lewis and Clark County. Perlite, used in concrete, paints, cleansing compounds, plastics, filters and as an aggregate in plaster, has been reported from Montana City, six miles south of Helena. Minerals mined west of Helena have been shown to contain some bismuth, a substance used chiefly in medicines but also employed in certain low-melting alloys and fire-prevention sprinkling systems. Fluorite, important in the production of refrigerants, propellants, aviation fuels, laboratory reagents, and in the aluminum industry, is in deposits in Lewis and Clark County. Several carloads of talc have come from the Pilgrim formation one mile south of Helena. Industrial sapphires have been produced by the Perry-Schroeder Mining Company from gold-dredging operations near Helena. The floating dredge on Prickly Pear Creek near Jefferson City suspended operations about the middle of 1959.

The Helena Working Circle has an estimated total of 1,255 patented mining claims and 5,000 unpatented mining claims within its boundaries. Within the Lincoln Working Circle are approximately 250 patented mining claims and 2,000 unpatented mining claims.

It has been indicated there are good possibilities for developing gold, lead, silver and zinc deposits in the mineralized Rimini and Marysville areas, depending upon an increase in the market price for these minerals.

The Anaconda Company recently drilled exploratory oil and gas wells in Lewis and Clark County. Five wells undertaken by the Company filled with water and as a consequence were economically of no value. There is apparently little possibility of continuing this program

Groundwater

The Townsend Valley is drained by the Missouri River, which enters the valley southeast of Toston and leaves through the northern end at Canyon Ferry. The Missouri River drops over 300 feet between its point of entrance and exit for a gradient of about five feet per mile.

The northern part of the Townsend Valley drains directly into the Missouri River. The drainage south of the Limestone Hills flows via Crow and Warm Springs creeks into the Missouri River. The Jefferson River receives drainage from the extreme southern part of the area. One source states: "The prospect of development of moderate to large supplies of groundwater from the Alluvial fill of such large valleys as the Bitterroot, Gallatin and Townsend Valleys, are excellent". *

Water from ground and surface sources in the Townsend Valley, moderately mineralized, is suitable for most domestic and irrigation uses. The United States Geological Survey has indicated that the valley has a large reservoir of groundwater.

* Groff, Sidney C., "The Ground Water Situation in Montana, Montana Bureau of Mines and Geology, December, 1958 - p.13.

South of Toston a diversion dam was completed in 1939 by the State Water Conservation Commission. In the spring of 1940 water was diverted into various canals which irrigated about 15,000 acres north of Toston and approximately 3,000 acres in the lower part of the Crow Creek area.

Waterlogging results from groundwater movement and from irrigation water recharge. Uncontrolled flooding has also caused the waterlogging of much land. In 1949 a sprinkler-type irrigation system was introduced in the Valley with several types of these being installed in 1950.

Wells drilled into alluvial deposits at the valley bottom or into tertiary deposits were thought to be sufficient in quantity to supply domestic and stock needs.

Recent studies indicate the possibility that a large ground-water reservoir may exist under the Helena Valley. The valley is underlain with lake beds. Ground water could possibly be used to irrigate much of the valley land irrigated by surface water. Mining activity necessitates the removal by pumping, of large quantities of water from depths of more than 400 feet of granilitic mass in the Scratch Gravel Hills.

On the basis of Wilcox's criteria for irrigation waters both ground and surface water are classified as "excellent to good".

Irrigation of higher lands in the valley a few years ago has caused waterlogging of approximately 8,500 acres of productive land. As higher lands are irrigated more waterlogging may be expected unless action is taken to prevent additional ground water recharge or recover and dispose of excess ground water. The "lake beds" underlying the Helena Valley have a definite relationship to waterlogged areas.

The earthquake of 1935 affected the groundwater situation in the valley. New springs appeared within twelve hours after the October 18 shock; some streams experienced increased flow. Prickly Pear creek increased its flow by one-third.

THE ECONOMIC FUTURE

Vitality of the Economy

Vitality of the economic system is an important economic variable not directly revealed by raw census data. In general, the vitality of an economy determines its strength or its ability to withstand economic shock; individual economies vary considerably in their sensitivity to sudden upward or downward trends in economic activity.

Vitality cannot be measured directly as it is a subjective interpretation of a variety of economic data, but it is possible, however, to measure certain economic variables which are considered to indicate economic vitality. A crude and admittedly preliminary examination of a few such measures is presented below.

The diversity of industrial activity in an economic area bears a close relationship to its vitality, though it does not determine vitality. A highly specialized economy (in the extreme case, one organized around a single industry) is dependent to a high degree on the growth or decline of that particular industry. The more diversified it is the more rapidly can an economy absorb sudden change in any single industry.

One measure of this quality in an economy is the Rodgers' Index of Industrial Diversification, which expresses the diversification of a given area in terms of an index number which is comparable with a norm that is established by analyzing the United States 93 most industrialized Standard Metropolitan Areas in 1950.

In the following table this index has been calculated for Lewis and Clark County. Unfortunately, it is based on approximate figures, but it does indicate the industrial diversity of the local economy. The Index number for the county is .708; 0 represents the average diversification in 93 Standard Metropolitan Areas in 1950, and 1 represents the minimum of diversification, or maximum industrial specialization. In terms of this measure then, the economy of the region is relatively specialized and is characterized by a sensitivity to isolated economic fluctuations. This is also apparent in the fact that 70% of all industrial employment in the

county is engaged in three industries: food and kindred products, primary metals, and lumber and wood products.

RODGER'S INDEX OF INDUSTRIAL DIVERSIFICATION:
LEWIS AND CLARK COUNTY, 1954

	Empl.	%	Ranked	Cumulative
1. Lumber and Wood	210	20.0	29	29
2. Furniture	90		21	50
3. Stone, Clay, Glass	90	8.6	20	70
4. Primary Metals	220	21.0	10	80
5. Fabricated Metals			8	88
6. Machinery	60	5.7	6	94
7. Electrical Mach.			6	100
8. Transport Equipt.			0	100
9. Motor Vehicle			0	100
10. Professional Equipt.			0	100
11. Misc. Durable			0	100
12. Food and Kindred			0	100
13. Tobacco			0	100
14. Textiles			0	100
15. Apparel			0	100
16. Paper			0	100
17. Printing	105	10.0	0	100
18. Chemical	60	5.7	0	100
19. Petr. & Coal			0	100
20. Rubber			0	100
21. Leather			0	100
22. Not Specified			0	100
				2011

$\frac{2011-1553}{2200-1553} = \frac{458}{647} = .708$ (Refined Index)

Refined Index of 0 = average diversification of 93 most industrialized SMA's in 1950.

1 = minimum diversification

However, care must be used in judging the significance of these figures for the vitality of the Helena economy, which has specialized in public administration, not industrial activity. In Lewis and Clark County in 1950 only 9.1% of the total reported employment was engaged in manufacturing, but over 14% was engaged in public administration. This was true generally in the trade area where the percentage of employment in public administration was 12.7%, compared with only 4.7% in the State. In the City of Helena, nearly 17% of total employment in 1950 was in public administration. This is of great significance for the economy of the area because public administration is highly insensitive to cyclical economic fluctuations.

EMPLOYED PERSONS ENGAGED IN PUBLIC ADMINISTRATION				
	1940		1950	
	No.	%	No.	%
Lewis and Clark	958	12.1	1,473	14.1
Broadwater	30	2.3	24	2.0
Meagher	33	3.5	26	3.2
Trade Area	1,021	9.3	1,523	12.7
State	7,657	4.2	10,107	4.7
Helena			1,308	16.8

Furthermore, service occupations generally, including educational, medical, religious, communication, personal, transportation, and financial services, are generally below average in cyclical sensitivity, and these activities represent an unusually large portion of the area's employment. This characteristic of the economy gives it considerably more strength than the Diversification Index suggests.

One indication of the stability that the area's economy enjoys as a result of its foundation on public administration and service occupations is presented by unemployment data. The following table represents a comparison of percentages of unemployment to the total population. In the same table a low index, or mean deviation from the mean, indicates a relatively constant rate of unemployment. Thus, in the ten-year period covered by these data, among the seven Montana cities with populations over 10,000 in 1950, only one had a lower index of unemployment stability.

The same is true regarding the average amount of unemployment--only Bozeman ranks lower than Helena. Bozeman's low rank is probably a function of its high degree of specialization in educational services, which represented over 17% of total employment in 1950. Missoula ranked higher in unemployment because, although there were more educational employees than in Bozeman, they represented a smaller part of the work force--9.8% in Missoula. Missoula is considerably more industrialized also; manufacturing employment accounted for 11.4% of total employment in Missoula in 1950; in Bozeman, only 5.8% were so employed.

AVERAGE UNEMPLOYMENT BENEFIT CLAIMS
AND MEAN DEVIATION FROM THE MEAN

	Mean % of 1950 Pop. Unemployed	Mean Deviation from the Mean, 1948-1949
Helena	2.3	.757
Bozeman	2.0	.429
Butte	3.7	2.143
Anaconda	3.8	3.971
Billings	3.3	1.386
Great Falls	2.7	1.157
Missoula	4.1	1.100
The State	1.8	.614

Thus, unemployment in Helena during the period was almost as low and almost as stable as in the State as a whole. Employment in the State, however, was predominantly agricultural and there were considerably fewer sources of economic instability than there were in the urban economy. It would seem that for an urban economy, and one little diversified industrially, the economy of the Helena region is an unusually stable one, enjoying above average vitality.

Unemployment payments amounted to 2.06% of Lewis and Clark County's total wages in 1959, while in all of Montana the figure was 2.32%. In Broadwater County unemployment benefits represented 5.75% of the county's total wages, while in Meagher County, the percentage was 3.93.

Of all 56 Montana counties in the order of their dependence on unemployment payments in 1959, Broadwater County was 9th, Meagher County was 22nd, and Lewis and Clark County was 46th.

PERCENTAGES OF UNEMPLOYMENT BENEFITS TO WAGE TOTALS

	Montana	Broadwater	Lewis & Clark	Meagher
1955	.89	2.56	.88	1.53
1957	1.13	2.29	1.06	2.52
1959	2.32	5.75	2.06	3.93

The area served by the Helena office of the Montana State Employment Service includes Helena, Boulder, White Sulphur Springs, Garrison and Townsend. Although, work at the State Capitol has a stabilizing effect on the area's employment, the number of jobseekers does vary with the seasons, and with the ups and downs of the business cycle.

In 1955 the number of unemployed workers in this area varied from a low of 164 in September to a February high of 663. This expected variation was caused by the seasonal nature of employment such as construction or agricultural work. In 1958, however, during the economic recession, the number of unemployed in the area ranged from 482 in October, to 1,375 in April. The August, 1960 unemployment figure of 332 was the lowest in almost three years, and approached the 1955 August figure of 300.

Economic Projections

Equally as important as its vitality is the capacity of an economy for growth. It is a widely held view in urban economics that the growth of an urban economy is largely dependent on its capacity for drawing income from beyond its borders. This drawing power is in turn based on the proportion of economic activity that is devoted to creating economic products for export to consumers outside the area. These activities are known as basic industries. All others are non-basic or service activities.

Economists have suggested as a norm a ratio of 2.0 service workers to one basic worker. The preponderance of non-basic economic activities in the Helena area is apparent in the following table, which shows that the non-basic to basic ratio in Helena in 1950 was 10.1, compared with 3.7 in Montana's seven largest cities, and with 1.6 for the State as a whole. In Lewis and Clark County the ratio was 4.2; in the trade area, 2.9.

The economist, Colin Clark, in his analysis of the conditions of economic progress, has suggested a finer classification of economic activities that divides basic activities into two classes, while services remain a single category.

BASIC AND SERVICE EMPLOYMENT

	% Basic	% Service	Service per one basic
Helena	9	91	10.1
Montana's Seven Largest Cities	21	78	3.7
Montana Average	38	62	1.6
Lewis and Clark	19	81	4.2
Broadwater	63	37	0.6
Meagher	64	36	0.6
Trade Area	26	74	2.9

The distribution of employment among these three categories in 1940: (a) primary--agriculture, extractive (b) secondary--manufacturing (c) tertiary--services, and 1950 is shown for the State, the trade area and the seven largest Montana cities in the following table.

PRIMARY, SECONDARY, AND TERTIARY EMPLOYMENT
Trade Area and Seven Largest Cities

	Primary		Secondary		Tertiary	
	1940	1950	1940	1950	1940	1950
Lewis and Clark	18%	10%	4%	9%	76%	81%
Broadwater	76	60	2	3	22	37
Meagher	66	58	1	6	33	36
Montana	40	30	7	9	53	62
Helena	4	2	8	7	88	91
Missoula	3	3	11	11	86	85
Great Falls	2	2	36	15	62	83
Butte	36	32	5	6	58	61
Billings	2	1	10	10	88	88
Anaconda	13	0	45	57	42	42
Average	12	8	17	13	70	78

Clark has shown that economic progress in the U.S. has been accompanied by a shifting distribution of employment among these three classes. Progress was accompanied by an initial decline in primary employment and increase in secondary; secondary employment reached a peak of 26.4% in 1920. After this it declined in relative importance as tertiary employment began to increase.

There are some hazards in applying such an analysis to a local economy but certain problems of the economies of the state and the Helena region can be illuminated by its application. Primary employment has declined in the State and tertiary employment has increased significantly, but secondary employment has fallen short of the peak it reached in the nation in 1920. In 1950, it accounted for less than 9% of employment in the State, about 9% in the Helena region, and 7.4% in the City of Helena. It is interesting to note that secondary employment in the nation reached its peak in the same decade that the population for the first time became more than 50% urban. Urbanization in Montana will undoubtedly reach this point in 1960, while industrialization lags far behind.

This analysis has significance for the dynamics for the Helena economy and means that in its present state the economy has a greater capacity for stability than for growth. At least two practical consequences for the planner are indicated. First, future economic development in the trade area's economy should place maximum emphasis on expansion of secondary economic activity to balance the burgeoning service employment. Second, this relatively stable character of the economy must temper employment forecasts and projections of the area's economy.

In projecting employment trends in Lewis and Clark County, the step-down method used to apportion national employment estimates must be cast aside for less satisfactory methods, because of the erratic relationship between employment in the county and employment in the State economic area over the past thirty years. Hence, it is necessary to rely on a less comprehensive analysis of past trends.

Total employment in the Helena trade area decreased 4.8% from 1930 to 1940 and increased 27.4% from 1940 to 1950. The average rate for the two decades was 11.3%. If employment increased at that rate from 1950 to 1960 and 1960 to 1970, the 1970 employment of the trade area would be approximately 15,300.

The area's employment can also be predicted by projecting State employment. By the step-down method of apportioning national employment projections, the 1970

employment of Montana may be estimated as 236,000. In both 1940 and 1950, the trade area's employment constituted 5.9% of State employment. A continuation of this trend would mean a regional employment of 14,200 in 1970. A moderate estimate of regional employment in 1970 would be 14,800 to 15,000.

Lewis and Clark County employment increased 1.8% from 1930 to 1940 and 29.7% from 1940 to 1950, for an average percent growth of 15.8%. This would suggest a 1970 employment in the county just over 14,100.

Employment in the county has represented a moderately increasing percentage of total State employment, increasing from 4.7% in 1930, to 5.2% in 1940, and to 5.5% in 1950. An extrapolation of this trend would indicate a 1970 employment in the county of 13,000 to 13,700. We may take 13,500 to 13,800 as a moderate estimate of the 1970 level of employment in Lewis and Clark County.

Implication of Employment Projection for Land Use Planning

In the City of Helena itself, employment in 1940 constituted 69.6% of the total county figure, and in 1950 the percentage was 74.2. If it remained at 75% of the county total, a city employment of 10,400 in 1970 would be indicated. It will probably be somewhat higher, as the city comes increasingly to dominate the county and the trade area. City employment, on the other hand, most likely will not continue to increase at the 1940-1950 rate of 36% per decade. The unlikely continuation of this trend would indicate a 1970 city employment of nearly 15,000. An employment level closer to 11,000 is more likely barring any drastic changes in the structure of the local economy.

In the urban economy of 1970 there will probably be a further increase in the proportion of the service employment, but land use devoted to retail and wholesale activities probably will not increase more than the total employment. On the other hand, past trends would suggest a moderate increase in the relative importance of manufacturing and construction activity, and land use planning should reflect this increasing demand on the total land use pattern.

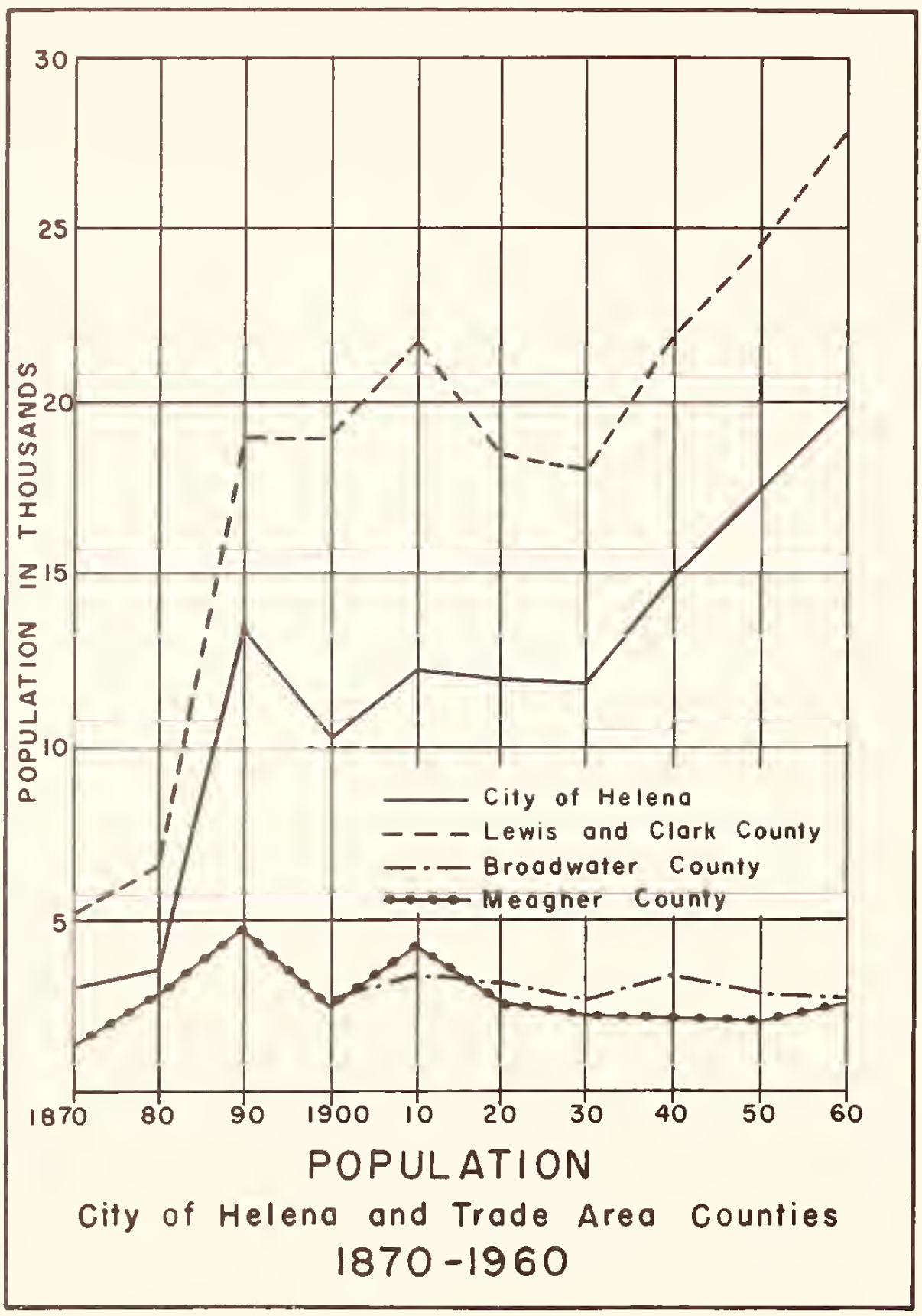
P O P U L A T I O N

PAST TRENDS

Trade Area

The population of the tri-county area in 1960 was 33,101 representing a 12% increase over the 1950 figure. Broadwater County, however, lost 4.6% of its population during this period, although slowing its 1940-1950 percentage decrease of 15.3%. Meagher County population in the last decade rose 23%, while that of Lewis and Clark County increased 13%.

Preliminary 1960 census counts recorded Lewis and Clark County's population at 27,746; it was 2,789 for Broadwater County and in Meagher County, 2,566. Of the entire tri-county population, the City of Helena represented approximately 61% in 1960.



POPULATION

City of Helena and Trade Area Counties

1870-1960

Lewis and Clark County

Lewis and Clark County was fourteenth in land area and sixth in population among Montana's 56 counties in 1960. Throughout the last three decades, its population has steadily increased: its 1930 population was 18,224; during the depression the county gained population until the 1940 census count was 22,131. From 1940 to 1950 population increase slowed somewhat, although the latter year still showed a gain of 2,409 persons over 1940. With another increase of 13% in the last decade, the 1960 population in Lewis and Clark County was 27,746.

Cities of Helena and East Helena

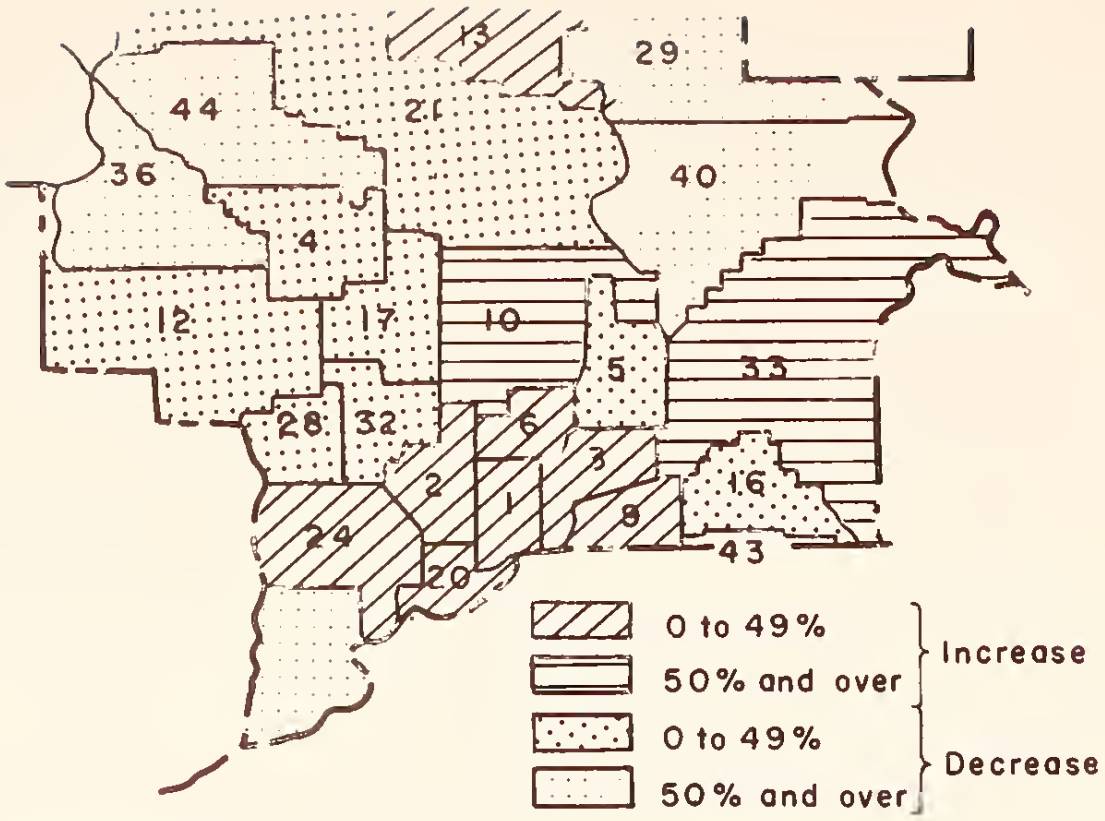
Population gains within Lewis and Clark County rose a total of 3,206 persons between 1950 and 1960. For the most part this increase took place in the urban areas of the county.

The City of Helena's population rose from 17,581 in 1950 to 20,090 ten years later. This gain within the incorporated city limits accounted for 78% of Lewis and Clark County's 1950 to 1960 increase of 3,206 persons. In 1930, 64.8% of the Lewis and Clark County's population lived in the City of Helena; by 1940 the figure was 68%; in 1950, 71.6%; and 72.4% of the county's population lived in the City of Helena by 1960.

Since 1930, census counts have recorded steady population gains in the City of East Helena. The city's population, which was 1,216 in 1950, increased nearly 19% to a total of 1,445 in 1950 according to preliminary census figures. Of the total population of Lewis and Clark County outside of the City of Helena, East Helena accounted for approximately 18% in 1950 and 19% in 1960.

Minor Civil Divisions

A study of past population trends within census sub-districts of Lewis and Clark County indicates that the major growth trends are occurring within the urban areas and in the immediately adjacent census districts. In 1930 the population of the entire urban area, which includes Helena, East Helena, Kessler and College Place, was 14,091, representing over 76% of Lewis and Clark County's population. By 1940 the population of this urban area comprised over 78% of the county's total, and in 1950 the proportion was over 82%. Although 1960 figures for the Minor Civil Divisions have not yet been released, it is probable that the trend toward urbanization has continued. A chart of minor civil division population trends is shown on the following page.



Percent Increase – Decrease 1930-50

Although the percentage data upon Minor Civil Divisions shown on the facing page has been changed somewhat by annexations and consolidation of some of the areas, a trend to urbanization can be observed.

All the census divisions that may be considered urban, have experienced population increases from 1930 to 1940 and 1940 to 1950. It is expected that this trend has continued in the past ten years.

The two urban minor civil divisions showing the greatest percentage population increase, other than incorporated cities, are:

Kessler, with a 41.1% increase from 1930 to 1950.

Prickly Pear Valley with a 20.7% increase over the same period of time.

Other areas showing increases include:

Hauser Lake, (this increase is quite high, due to 1947 annexation).

Wolf Creek

Unionville

Boxendale

York

York also experienced consolidation in 1947, thus boosting the percentage increase.

POPULATION OF LEWIS & CLARK COUNTY
by Minor Civil Divisions 1930-1950

	1950	1940	1930
Lewis and Clark County	24,540	22,131	18,224
Dist. 1, Helena	17,845	15,383	12,094
Helena City	17,581	15,056	11,803
Dist. 2, Kessler	1,345	1,059	953
Dist. 3, Prickly Pear Valley	169	132	140
Dist. 4, Trinity	87	108	94
Dist. 5, Harmony	68	87	112
Dist. 6, College Place	311	327	296
Dist. 7, Rimini	28	68	66
Dist. 9, East Helena	1,390	1,301	1,212
East Helena Town	1,216	1,143	1,039
Dist. 10, Hauser Lake*[1]	265	177	149
Dist. 12, Marysville	147	254	176
Dist. 13, Wolf Creek	279	286	256
Dist. 14, Seven Mile Post	32	37	79
Dist. 16, Spokane Creek*[2]	63	56	79
Dist. 17, Silver	37	56	55
Dist. 20, Unionville*[3]	138	156	89
Dist. 21, Mitchell	66	61	111
Dist. 22, Dearborn	92	53	72
Dist. 24, Boxendale	85	81	69
Dist. 25, Craig	112	141	224
Dist. 27, Orchard Creek	128	63	32
Dist. 28, Butler	41	64	62
Dist. 31, Gilman*[4]	68	117	154
Dist. 32, Clough	45	51	64
Dist. 33, York	382	270	53
Dist. 36, Little Prickly Pear*[5]	32	116	73
Dist. 38, Lincoln	350	284	116
Dist. 39, Flesher	119	49	22
Dist. 40, Beaver Creek	7	47	70
Dist. 41, Barrett	26	70	48
Dist. 44, Wilborn	30	134	60
Dist. 45, Augusta	733	826	858
Jt. Dist., 43, Claissie	20	23	45

*1 Dist. 30, Longview, changed to Dist. 10, Hauser Lake, in 1947.
*2 Dist. 15, Upper Silver, annexed to Dist. 30 in 1947, see Dist. 10.
*3 Dist. 18, annexed to Dist. 13 in 1947.
*4 Dist. 8, and 29, Middle Fork and Willard, annexed to 22 in 1947.
Part of Cascade annexed to 25.
*5 Dist. 34, Canyon Ferry, and 42, Lakeside, annexed to 33 in 1947.

FUTURE POPULATION

Trade Areas

Assuming that economic and social conditions of the past continue in coming years, future population can be estimated by mathematically projecting the past trends. The average tri-county increase per decade since 1930, for example, has been 13.9%; if continued, this rate of increase would mean a 1970 trade area population of about 37,000, and a 1975 figure of over 40,000.

Population projections for individual counties added up to a slightly lower trade area population. The 1975 estimate for Broadwater County was 2,800, based on an average increase of 2.11% per decade for the last thirty years; that for Lewis and Clark County was 34,300 and for Meagher County it was 2,700. The latter estimates were based on average ten year increases of 15.11% and 4.91% respectively. Based on these individual county projections - total tri-county proplation should be approaching 40,000 by 1975.

Lewis and Clark County

The steady population gains that have taken place in Lewis and Clark County since 1930 are likely to continue in the future. The average percent of increase per decade has been 15.11%, with a low of 10.9% and a high of 21.4%. Based on these past trends, the county's 1970 population should be about 32,000 and for 1975 should approach 34,000.

The Cities of Helena and East Helena

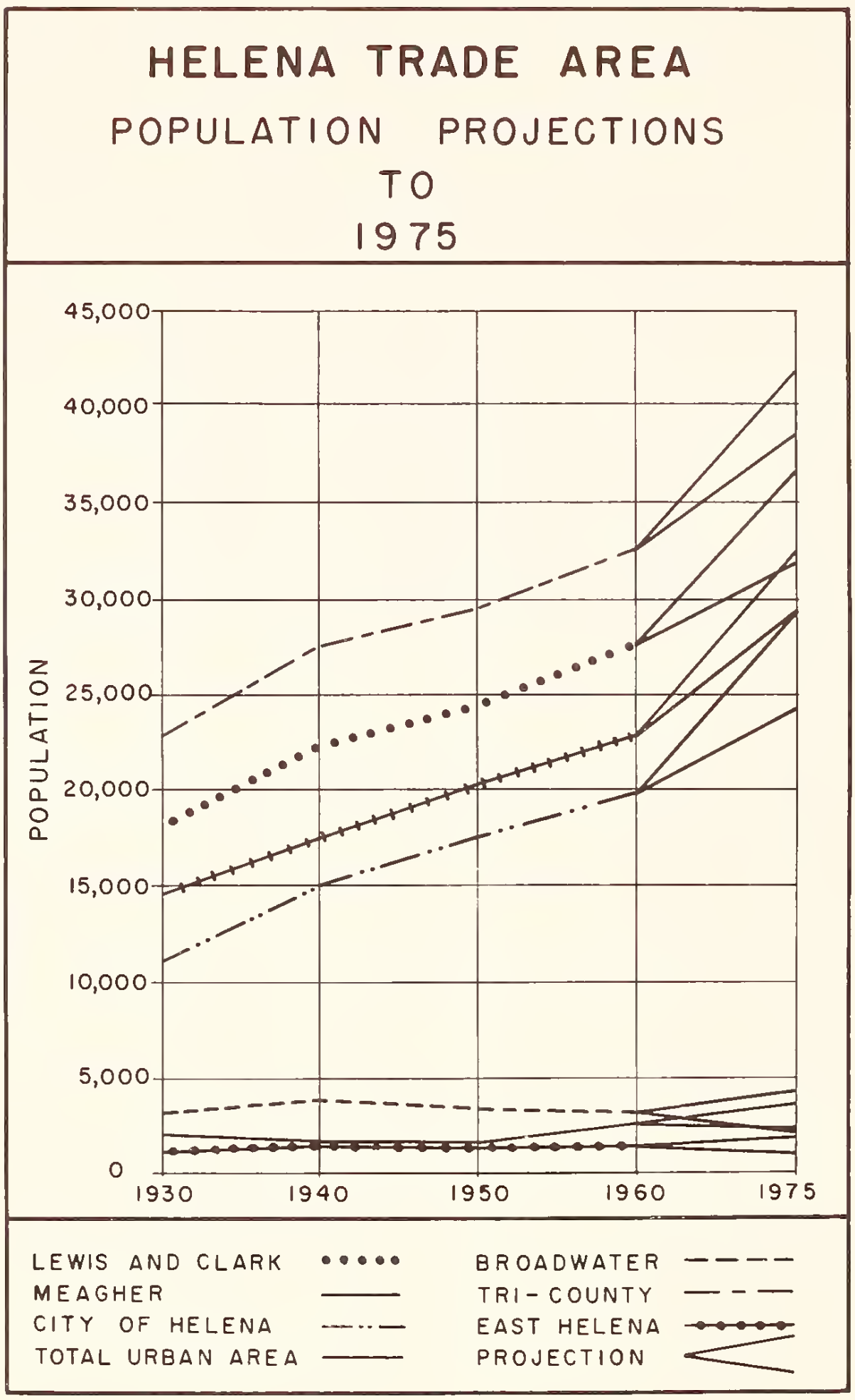
Helena's average population gain per decade for the past thirty years has been 19.5%, ranging between a minimum of 14.26% and a maximum of 28%. According to the average figure, Helena's population should approximate 26,500 by 1975.

A 1975 East Helena population of 1,710 is indicated by its past average of 11.5% increase per decade.

It should be borne in mind that the estimates of population for incorporated cities depend to a great extent upon availability of land within the city limits and possibilities of annexation.

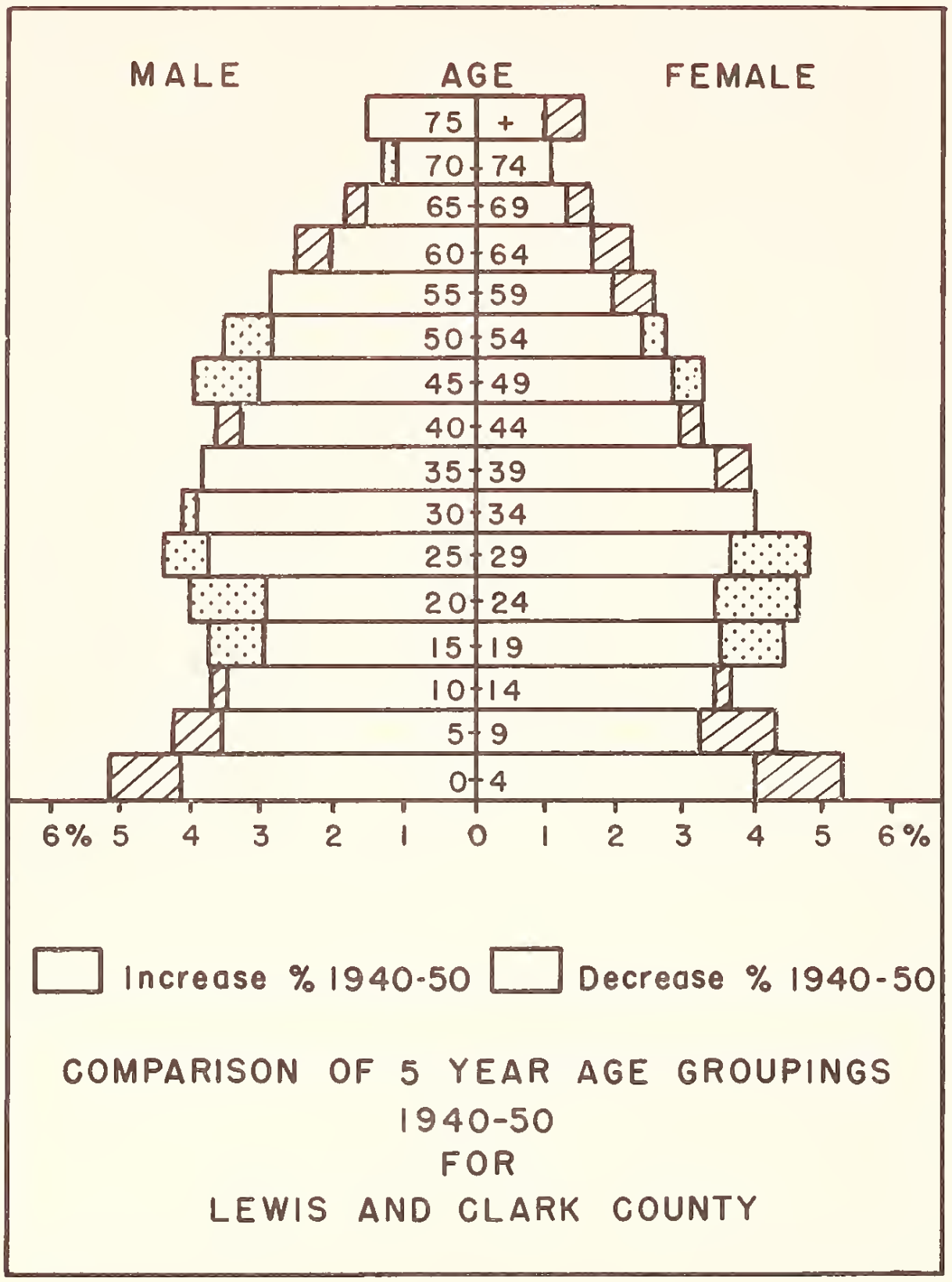
Urban Area

Population of the total urban area, including East Helena, Helena, and the minor civil census divisions of Kessler and College Place, has risen an average of 20.5% per decade since 1930. The lowest increase of 16.2% occurred between 1940 and 1950, the high of 24.7% took place in the decade beginning in 1930. The projected urban area population for 1975 is estimated at over 31,000, thus, by 1975 the urban area should account for over 90% of Lewis and Clark County's population.



AGE SEX DISTRIBUTION

1960 census age-sex distribution figures have not yet been released. When the 1950 census was taken, 50.2% of Lewis and Clark County's population were males, and 49.8% females. At the same time 52.4% of Montana's population was male, and 47.6% female. The median age in the State that year was 29.9 years, while that for Lewis and Clark County was 32 years.



The percentage of both boys and girls under five years of age in the county has steadily increased in the last three decades. According to a 1960 report issued by Helena's School District Number 1, however, the num-

ber of pre-schoolers is expected to level off somewhat in the next few years. The percentage of boys under five years old has increased from 7% of all males in the county in 1930 to 10.3% in 1950. Girls in this age group made up 10.6% of the county's female population. Those under five years old comprised 11.5% of the total population in 1950.

At the other extreme, the proportion of men over 65 years of age living in the county decreased from 9.7% in 1930 to 8.8% in 1940, and went up again to 9% in 1950. The proportion of women in this age group has been steadily increasing, although it is still not quite as high as that for men. Women over 65 years of age comprised 6.9% of the female population in 1930, and 8.9% in 1950.

The group of men between the important labor force ages of 15 and 34 comprised a smaller proportion of the male population in 1950, than they had when the two previous census counts were taken. While the percentage of males in this age group was 27.2% in the county, that of women was 29.6%. In Montana, for both sexes, this age group comprised 29.2% of the population.

Interestingly, the median age for the State was 29.9 years in 1950, but it was 32 years in Lewis and Clark County, 30.4 in Broadwater and 35.3 in Meagher Counties.

The median number of school years completed by persons over 25 years of age in Montana was 10.2 in 1950; Lewis and Clark County was the only one of the trade area counties with a higher median: 11.7 years; four other Montana counties had higher medians. The number in Broadwater County was 9.8, and in Meagher County, 8.9 years.

POPULATION DISTRIBUTION

The facing map shows the distribution of population throughout the Helena Urban Area. Each dot shown on the map represents fourteen persons as of 1959.

The map shows four outstanding features:

1. The heavy concentration of population surrounding the downtown area of Helena.
2. The relatively even population densities in the new residential areas of the Cities of Helena and East Helena.
3. The growth of residential subdivision along Highways 91 and 10N.
4. The ability of the present Helena-East Helena urban area to accommodate future growth.

The main point to be considered in studying the population distribution is whether the population density, or the number of persons living on an acre of ground, will enable the economic provision of municipal facilities.

Population distribution throughout the area at this time indicates a trend of residential decentralization, particularly along the State Highway system to the north and west. This trend should be studied for possible detrimental effects.

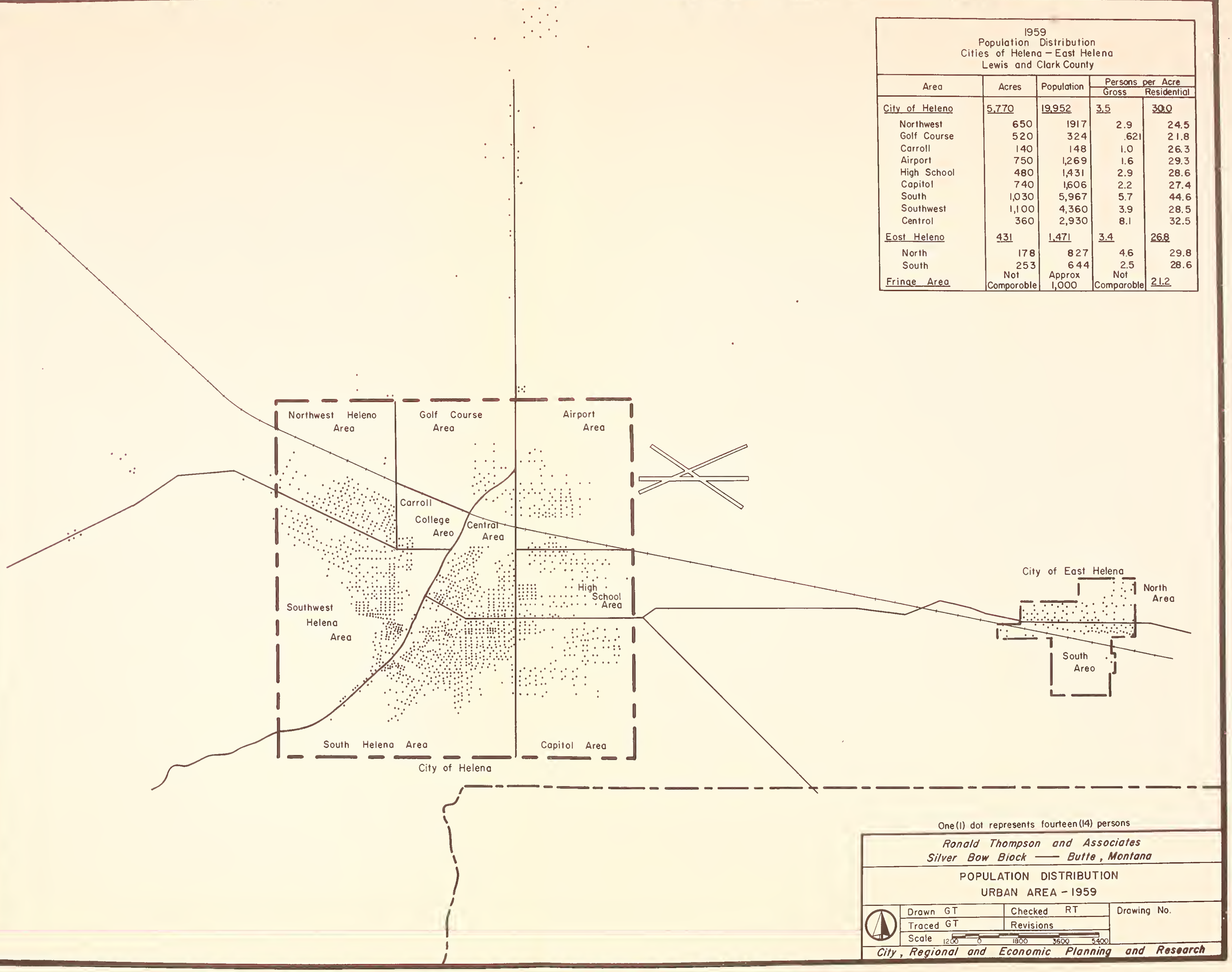
Some of the effects that low-density fringe growth may bring are:

1. Provision of municipal utilities in low density areas becomes uneconomic. Lack of sewer and water supply can cause public health problems of pollution.
2. Location of schools, within walking distance for every child would require at least a minimum population density of five persons per acre.

It is believed that adequate zoning and subdivision control in the fringe areas can guard against some of these problems, and care should be taken in developing such controls that fringe growth be guided into the best and most efficient patterns of development for the community.

1959
Population Distribution
Cities of Helena – East Helena
Lewis and Clark County

Area	Acres	Population	Persons per Acre	
			Gross	Residential
City of Heleno	5,770	19,952	3.5	30.0
Northwest	650	1917	2.9	24.5
Golf Course	520	324	.621	21.8
Carroll	140	148	1.0	26.3
Airport	750	1,269	1.6	29.3
High School	480	1,431	2.9	28.6
Capitol	740	1,606	2.2	27.4
South	1,030	5,967	5.7	44.6
Southwest	1,100	4,360	3.9	28.5
Centrol	360	2,930	8.1	32.5
Eost Heleno	431	1,471	3.4	26.8
North	178	827	4.6	29.8
South	253	644	2.5	28.6
Fringe Area	Not Comporoble	Approx 1,000	Not Comparoble	21.2



One (1) dot represents fourteen (14) persons

Ronald Thompson and Associates
Silver Bow Block —— Butte, Montana

POPULATION DISTRIBUTION
URBAN AREA - 1959

Drawn GT	Checked RT	Drawing No.
Traced GT	Revisions	
Scale 1200 0 1800 3600 5400		

City, Regional and Economic Planning and Research

PARKS AND RECREATION

In a recent paper entitled "The Dynamics of Park Demand" by Marion Clawson, space and facilities for outdoor recreation in the New York Metropolitan area and the Nation are summarized in the following quotation:

> "The demand for all forms of outdoor recreation will increase at an unprecedented pace during the next 25 years in the New York Metropolitan area and the United States as a whole. There will be a substantial rise in each of the factors which most affect the demand for recreation: population; per capita income; leisure time; ease of travel. Growth in any one of these separate factors would be significant, and when such gains are combined, the import on the need for parks and other open space becomes a major challenge of our time".

At first glance it appears that this statement does not apply to Montana with its abundance of vast open spaces, but it is important to review the open space actually available to the public at this time, and how much will be available to future generations. It is true that in Montana the lack of recreational land has not become as serious as in some of the more populous states with metropolitan regions, but many families and groups look to Montana's open areas for recreation, and it is necessary now to plan facilities for the present demand and prepare for the certain increase in use of this land.

The purpose of this report, however, is to consider more particularly the recreational facilities and park land within the urban area. It is within these areas that the problem becomes critical, for here, as in most built-up areas, there is an acute shortage of park space and recreational facilities.

Park and recreational facilities appear to be that part of the community development which is most often neglected. Residents demand an adequate and safe water supply; a workable sewage system; electricity; gas; etc., but in many cases parks are considered last, both in the matter of acquisition of land and in development and provision of facilities for the park.

It has been noted in Helena and East Helena that some present parks may have scattered facilities but any form of landscaping or beautification is often totally lacking. The city does sometimes provide trees, shrubs,

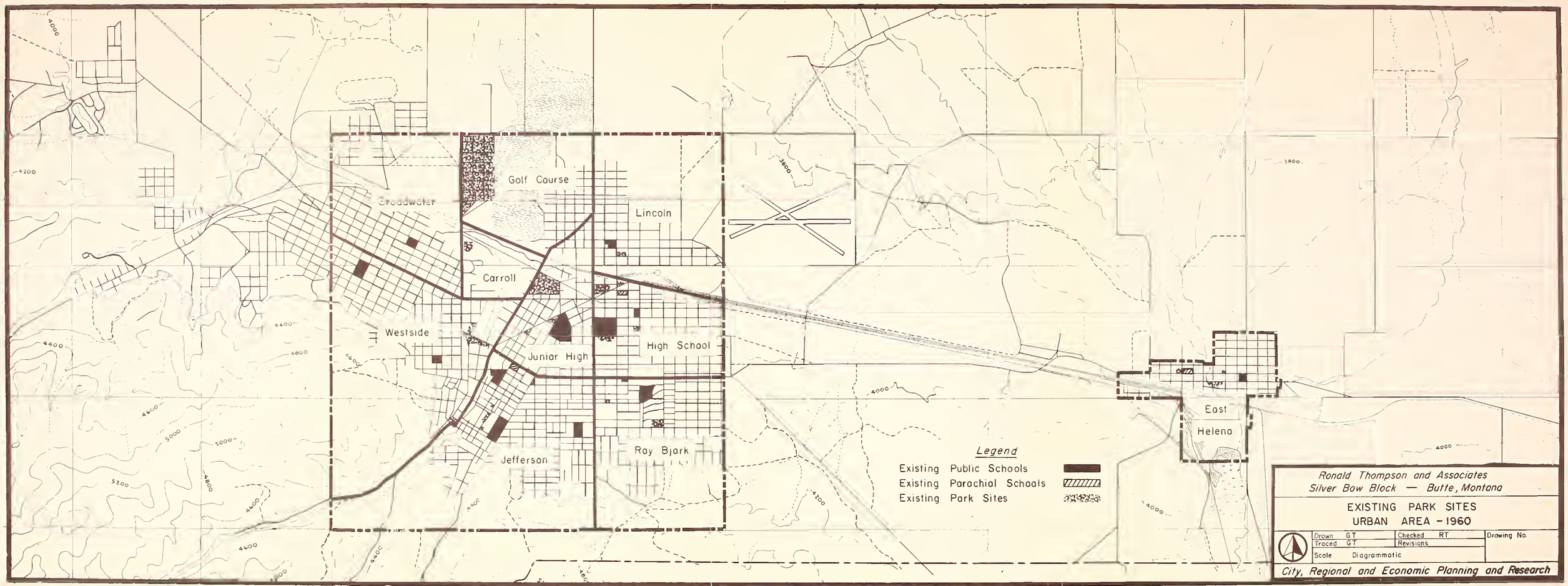
flowers, and lawn areas in the passive recreational areas, but the playgrounds and playfields should be landscaped also, rather than being allowed to remain barren deserts, with an occasional swing, slide, or merry-go-round projecting from the ground.

In very few of the Helena urban area playgrounds is there any landscaping, and in the few instances where this has been done, the results have most often proved ineffective. In the City of Helena, for example, most of the schools have some landscaping and lawn areas to the front of the building while the playground is completely devoid of any form of vegetation. There should be more landscaping in the playground area to enhance the enjoyment of the playground and play facilities. The play area of the school site is just as important as the school plant and both should be integrated into the total function of the school.

This matter of integrating the school and the playground has been carried further into what is known as the "park-school" concept. Under this concept the school plant is so designed that a portion of the school, such as the gymnasium, the auditorium and some of the classrooms, can be used after school hours and the remainder of the school closed off. Also under this concept the school play areas are made a part of the development of the site, with trees, shrubs, and other landscaping materials.

The basic theory of the park-school concept is that it allows greater use of the school plant and also makes play facilities readily available to the children of the neighborhood. The importance of this cannot be underestimated because it is acknowledged by educators and many others, that the physical development of the child is as important as the mental development. In most instances when the school plant is already constructed, the cost of the structural changes would make such a program impractical, and therefore, the park-school concept should be given serious consideration in the early planning stages prior to construction of a new school.

The eye appeal and enjoyment of the playgrounds of the existing schools could be substantially enhanced at relatively little cost by planting shrubs and other landscaping materials. Assistance in the design of play



Ronald Thompson and Associates
Silver Bow Block — Butte, Montana

EXISTING PARK SITES
URBAN AREA - 1960

Drawn GT	Checked RT	Drawing No.
Traced GT	Revisions	
Scale Diagrammatic		

City, Regional and Economic Planning and Research

areas can be obtained from the National Recreation Association which is a non-profit organization offering assistance at a nominal cost.

General Observations Regarding Parks and Recreation Areas in Helena and East Helena

Helena

In the City of Helena there is an approximate total of 144 acres in park and recreation land, which includes the 83 acres in the municipal golf course. The golf course, comprising approximately 57% of the total park land, is the largest park area. The next largest park is the Memorial Park with a total acreage of over 20 acres, and from here the size of the parks drops drastically. There is the large area of the Civic Center Park with 4 acres, and Hill and Ladies Park with about 5.5 acres, making a combined total of approximately 10 acres. In addition there is Gallatin Park with a total acreage of 4.4 acres, and two other parks with approximately 3 to 4 acres each. These are Lockey Park to the east of the Capitol and the park immediately west of the Junior High School.

The remaining parks contain less than two acres each, and are of little value for development as playgrounds, without the acquisition of additional land. There are 13 of these small park areas with a combined total acreage of approximately 13 acres.

The City of Helena has a total of 8 parks including the golf course which are large enough for development as active recreational areas, and the remaining 13 parks could be used for passive recreation, though some of them have little value for any type of recreation and could better be returned to private ownership.

How does the park land in Helena compare with the acceptable standards? The most generally quoted standards for park land on a city-wide basis are 10 acres per 1,000 population, set by the National Recreation Association, or 15 acres per 1,000 persons set by the California Committee for Recreational Planning. The City of Helena has approximately 7.2 acres of park land per 1,000 persons and this is approximately 3 acres per 1,000 persons less than the minimum 10 acres per 1,000 persons set by the National Recreation Association. If the park land contained in the 13 parks of less than

2 acres is subtracted from the total park area there is only 6.55 acres of park land per 1,000 persons, or 4.5 acres per 1,000 persons - less than the minimum standard.

East Helena

East Helena has a population of approximately 1,471 persons. The total park area in East Helena is just over 5.5 acres. The park land necessary to serve the population is approximately 15 acres of land, according to the National Recreation Association. There is then, an overall deficiency of 9.5 acres of park land for the whole city. Again it will be noted that three out of the four parks have an area of slightly less than 2 and one park has an area of slightly less than one-half acre. The only park that approaches the minimum size for a playground is the Memorial Park with an area of approximately 3 acres. Fortunately, the City of East Helena is still in a stage of development where park land can be obtained relatively easily.

Standards for Recreation

The first step in establishing a recreation and parks program is to divide the city into relatively small units. The city is so large and complex in its structure and function that it would be impossible to study the city as a whole. These units are referred to as neighborhoods and the total city is essentially made up of a series of neighborhoods.

The neighborhood generally should not have an area greater than one square mile and the school and recreational area should be at the center and should also be the cultural and social center of the neighborhood. The neighborhood is delimited by natural and man made boundaries, such as sharp changes in topography, rivers, streams, and by major thoroughfares, highways, etc.. This method will be employed in the parks and recreation report for (Helena and East Helena).

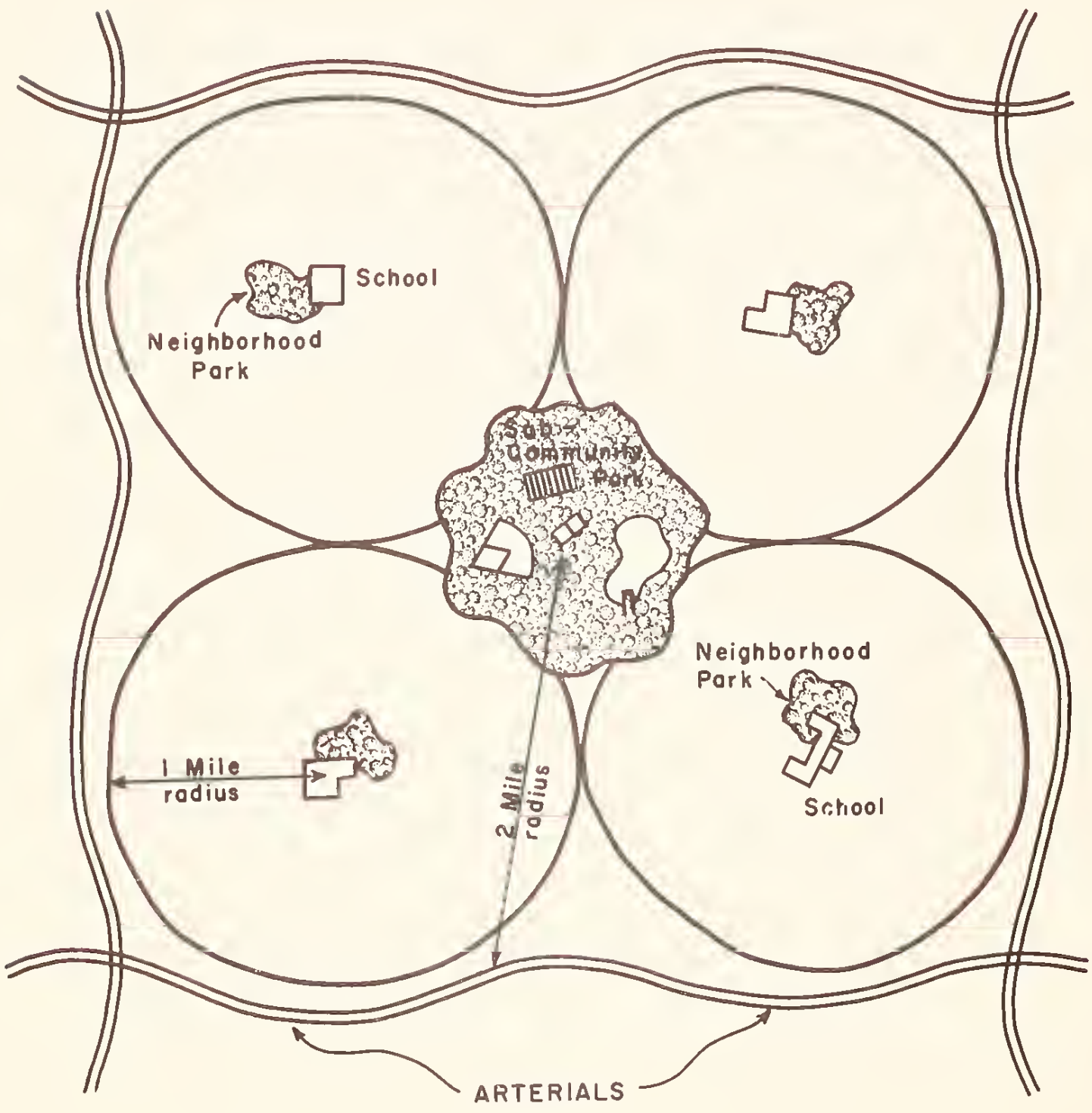
There are two types of parks. The first is the neighborhood playground which is designed to serve the neighborhood unit described above, and the second is the sub-community playfield, which is designed to serve a number of neighborhoods. These units are the two most important in building a parks and recreation program.

Other parks are the passive recreational areas which also serve to beautify the city, the municipal parks designed to serve the total urban community and the regional parks, to serve a number of communities in a given region.

SCHEMATIC DRAWING OF NEIGHBORHOODS IN RELATION TO SUB-COMMUNITIES

Note:-

1. Park-school location in center of neighborhood.
2. Arterial around neighborhood rather than through.
3. Walking distance to neighborhood and sub-community park.



Neighborhood Playgrounds

The urban area is essentially a series of neighborhoods, and, as mentioned before, the basic unit in the parks area recreation program is the neighborhood playground. In many cities the neighborhood playground has become even more important when cities have taken advantage of the park-school concept, in which case the park and school become the focal point of the neighborhood as explained earlier in the report. The minimum area needed for playgrounds is as follows:

2,000 population	3.5 acres
3,000 population	4.0 acres
4,000 population	5.0 acres
5,000 population	6.0 acres

Although the neighborhood playground is intended for children of grade school age it is also important to provide areas for pre-school children and adults. To accomplish this the National Recreation Association recommends that the following features be incorporated into the neighborhood playground:

1. Corner for pre-school children
2. Apparatus area for older children
3. Open space for informal play
4. Open area for court games, tennis, shuffle board, etc.
5. Space for field games, such as football, softball, and mass games
6. Area for story telling, crafts, dramatics
7. Shelter houses
8. Wading pools (where practical and supervised)
9. Corner for table games, and other activities for older people
10. Landscape features

The equipment of a typical playground should include the following:

1. Croquet court or multi-purpose area
2. Tennis court
3. Two sets of swings
4. One horse-shoe pit
5. One sand box
6. Benches
7. Tables
8. Equipment for games

As will be noted from the above list the playground should provide recreational facilities for the whole neighborhood and for all age groups. Thus, the neighborhood playground becomes the focal point for recreational activity. The provision of shelters and adult recreational facilities encourages the parents to be in attendance with the children at the playground in a family type of recreational activity.

Indoor recreational facilities are also an important part of the recreational program, especially in Montana where the inclement weather prevents outdoor recreational activities for a major part of the year. The following list of indoor facilities is suggested to be provided in the elementary school and be made available to the public after school hours.

1. Gymnasium with spectator seating
2. Auditorium or assembly room with stage
3. Multi-purpose room
4. Room for informal reading and table games
5. Locker, storage, showers, and toilet facilities
6. Storage space and staff office

The best method of accomplishing this is to close off the classroom areas as this area is not needed for recreation after school hours.

Community Playfield

The second type of recreational unit is the sub-community playfield. The primary design of the playground is to serve the immediate neighborhood, while the playfield is designed to serve the sub-community and those persons who are able to travel more than 1 mile to the recreational area. The sub-community playfield is not intended as a substitute for a playground but is in addition. The playground is primarily designed to serve children below the age of 15 while the playfield is intended to serve persons over the age of 15.

Referring to the standards as established by the National Recreation Association the playfield should not be less than 10 acres, with 20 acres being the more desirable. The playfield should serve the recreational needs of approximately 20,000 people and have an area of 1 acre of parkland for each 800 people.

In the overall recreational program the playfield should provide the following:

1. Separate sports field for men and women for such games as baseball, softball and football
2. Courts for tennis, horseshoes and shuffleboard
3. Lawn areas for croquet and archery
4. Fireplaces and tables for small picnic groups
5. Children's playground
6. Running track and space for field events
7. Recreation building or community center

Presently the Memorial Park is serving as the playfield for the City of Helena. The park has an area of

approximately 21 acres and contains the following facilities:

General

1. Outdoor swimming pool
2. Band shell
3. Picnic tables
4. Five slides
5. Three swing sets
6. Three monkey bar sets
7. Three merry-go-rounds

Small Children

1. Three swing sets
2. One monkey bar set
3. One teeter-totter
4. One sand box
5. A building for storage
6. Practice field
7. Ice skating rink
8. Landscaping

The Helena urban area is made up of three sub-communities, as follows:

1. Highschool sub-community, in the eastern part of the City of Helena
2. The Golf Course sub-community in the northern part of the City of Helena
3. The South-Westside sub-community in the south-western part of the City of Helena

These sub-communities are shown on the facing map.

High School Sub-Community

The Memorial Park which is located in the extreme northwestern part of this sub-community and which is presently serving as a municipal park for the City of Helena satisfies many of the requirements of a sub-community playfield, however, the park is still lacking in some of the major types of recreational areas such as a football field, tennis courts, shuffleboard courts, running track, etc..

Therefore, it is recommended that Memorial Park remain in its present formation as a municipal park and that study be given to establishing a sub-community playfield adjacent to the High School. There is adjacent to the High School a park containing 3.6 acres. This park area could be expanded to 10 acres by the purchase of the vacant land to the east of the school.

The High School sub-community contains the following neighborhood units:

1. Ray Bjork
2. Bryant
3. Lincoln
4. Junior High

A detailed analysis of each of these neighborhoods is made below:

Evaluation of Neighborhoods

Ray Bjork Neighborhood

The Ray Bjork neighborhood had a population in 1960 of 1,606 persons. The total park land is 5.1 acres for this neighborhood. This is in excess of the 3.25 minimum required by the National Recreation Association, but it can also be noted that two of the parks contain an area of less than 2 acres, making these parks of little value for active recreation. The park at the corner of Washington Drive and 6th Avenue should be retained as a passive recreation area, and the park at the junction of 9th Avenue and Saunders could possibly be sold and the income used for recreational purposes within the neighborhood. The remaining park in this neighborhood, Lockey Park, contains sufficient area for development as a neighborhood park.

It is recommended that Lockey Park be developed with a minimum of facilities and that the most intensive development be allotted to the Ray Bjork School, even though this site is not in the center of the neighborhood. This will make it possible to provide indoor and outdoor recreational facilities at the school door, thus tending to make the area the center of neighborhood activities. Lockey Park can then be kept in reserve for future development as the neighborhood continues to grow to the southeast.

The following is a review of present conditions and recommendations for the Ray Bjork neighborhood:

Park at Corner of 9th Avenue and Saunders Street

Total area---1.3 acres
Facilities---softball backstop
Recommendations---to be maintained in present use

Park at Corner of Washington Drive and 6th Avenue

Total area---0.7 acres
Facilities---lawn and flagpole
Recommendations---to be maintained in present use

Lockey Park

Total area---3 acres
Facilities---softball diamond and lawn area
Recommendations---the following recreation facilities should be provided:

1. open space for informal play

2. area for story telling
3. shelter houses
4. corner for table games and other activities for older people
5. Landscape features

Ray Bjork School

Total area---4.6 acres
Facilities---1 swing set
1 slide
1 merry-go-round
Recommendations---that the site be developed as a neighborhood playground with the following facilities:

1. corner for pre-school children
2. additional apparatus for older children
3. open space for informal play
4. surfaced area for court games such as tennis and shuffleboard
5. area for story telling
6. shelter houses
7. corner for table games for older people
8. landscape features

Bryant Neighborhood

There are three parks in the Bryant Neighborhood with a total area of 9 acres, and a population of 1,641 persons. Again it appears that there is more than ample park land for the population to be served, although one of the parks has an area of less than two acres and therefore, is not large enough for use as a playground. This is the Railroad Depot Park with an area of 1.5 acres which is presently well developed for passive recreation and should remain as such. A second park, the American Legion Ball Park, which has an area of approximately 4.4 acres should remain in its present use, but the recreational value could be substantially increased by the provision of a parking area and some landscaping.

The third park is adjacent to the High School. This area has been recommended previously for development as a community playfield by means of adjacent land purchase.

The Bryant School is developed as completely as possible in the present area, however, the vacant land in the western portion of the block should be purchased, either as part of the proposed Senior High School sub-community playfield, or for use as a playground.

The following is a summary of existing conditions and recommendations:

Railroad Depot Park

Area---1.5 acres
Facilities---wading pool
landscaping
old-time engine
Recommendations---this is a well developed park for passive recreation and should remain as such

American Legion Ball Field

Total area---4.4 acres
Facilities---small swimming pool
swing set
slide
teeter totter
ball field
Recommendations---that a definite parking area be designated; that the area be landscaped; that in addition to present play apparatus, the following be provided:

1. 1 swing set
2. 1 sand box
3. 1 merry-go-round

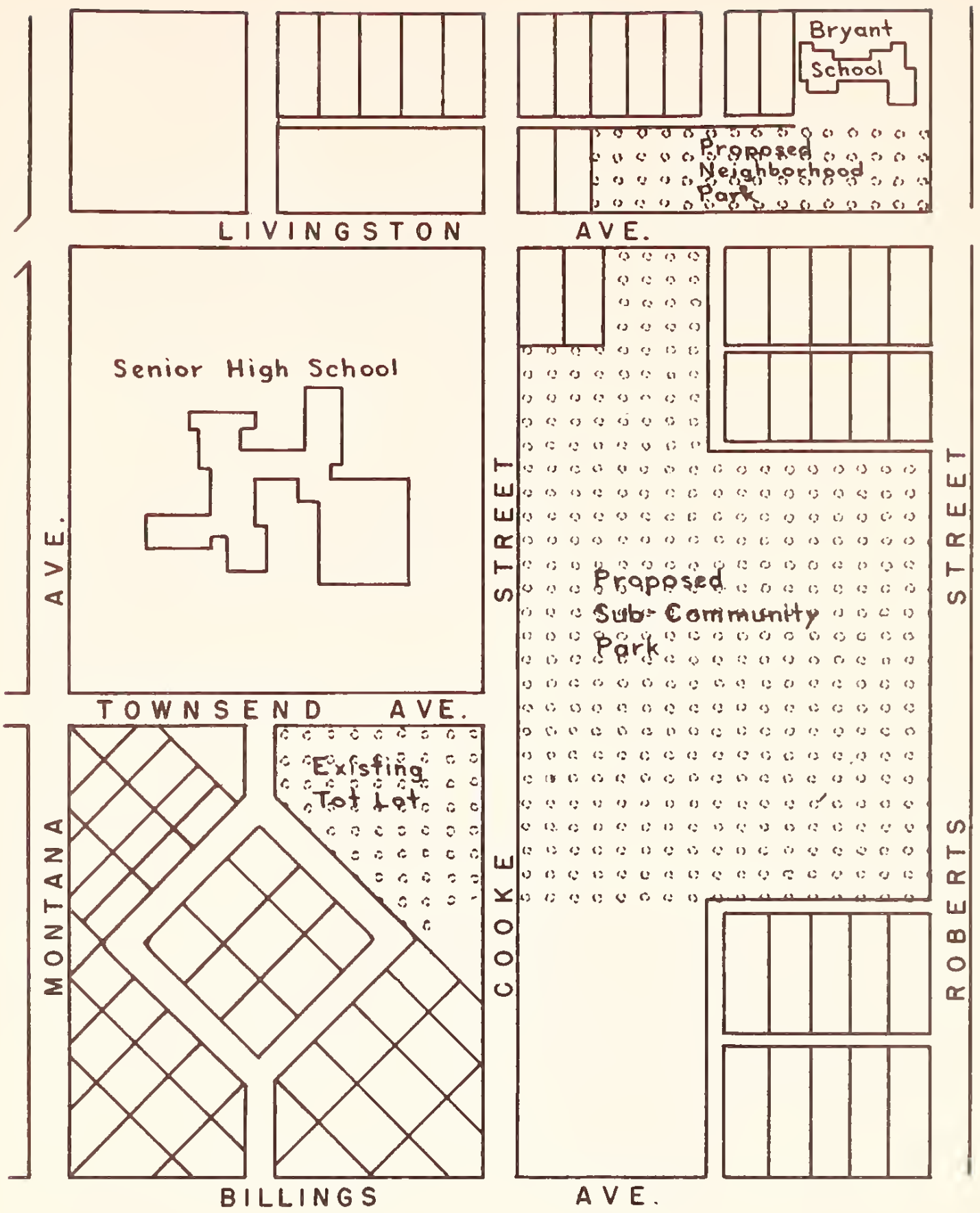
High School Park

Total area---3.7 acres
Facilities---1 softball backstop
2 swing sets for older children
2 swing sets for smaller children
1 slide
2 basketball goals
Recommendations---that a minimum of 10 acres of the vacant land to the east be acquired, to allow development as a sub-community playfield. That the High School be made available for indoor recreational activities, in particular the gymnasium, auditorium, library, toilet facilities, and kitchen. The following outdoor facilities should be provided:

1. 4 tennis courts
2. separate sports field for men and women
3. an indoor and outdoor swimming pool
4. fire place
5. tables and benches
6. children's playground
7. horseshoe and shuffleboard courts
8. lawn game areas
9. running track and space for field events
10. landscaping

Bryant School

Total area---1.2 acres
Facilities---1 merry-go-round
2 swing sets
1 slide
2 basketball goals
Recommendations---that the vacant part of the block to the west be purchased and developed as a playground, or added to the sub-community playfield.



Lincoln Neighborhood

This neighborhood has very little park land and a population of 1,269 persons. The only park in this neighborhood is a portion of the block on Walnut Street between Cooke and Saunders Streets, which has an area of 1.5 acres. The Lincoln School is located in this neighborhood and contains 2.0 acres.

The proximity of the park to the school site and the vacant land between makes it possible, by purchase of the vacant land, to acquire sufficient area for the establishment of a playground. Presently the school site is not large enough for a playground nor is the park. Consequently, neither of these areas is of any great value for recreational purposes at present. By purchasing the intervening vacant land, the full value of the park and the school site for recreational use could be realized.

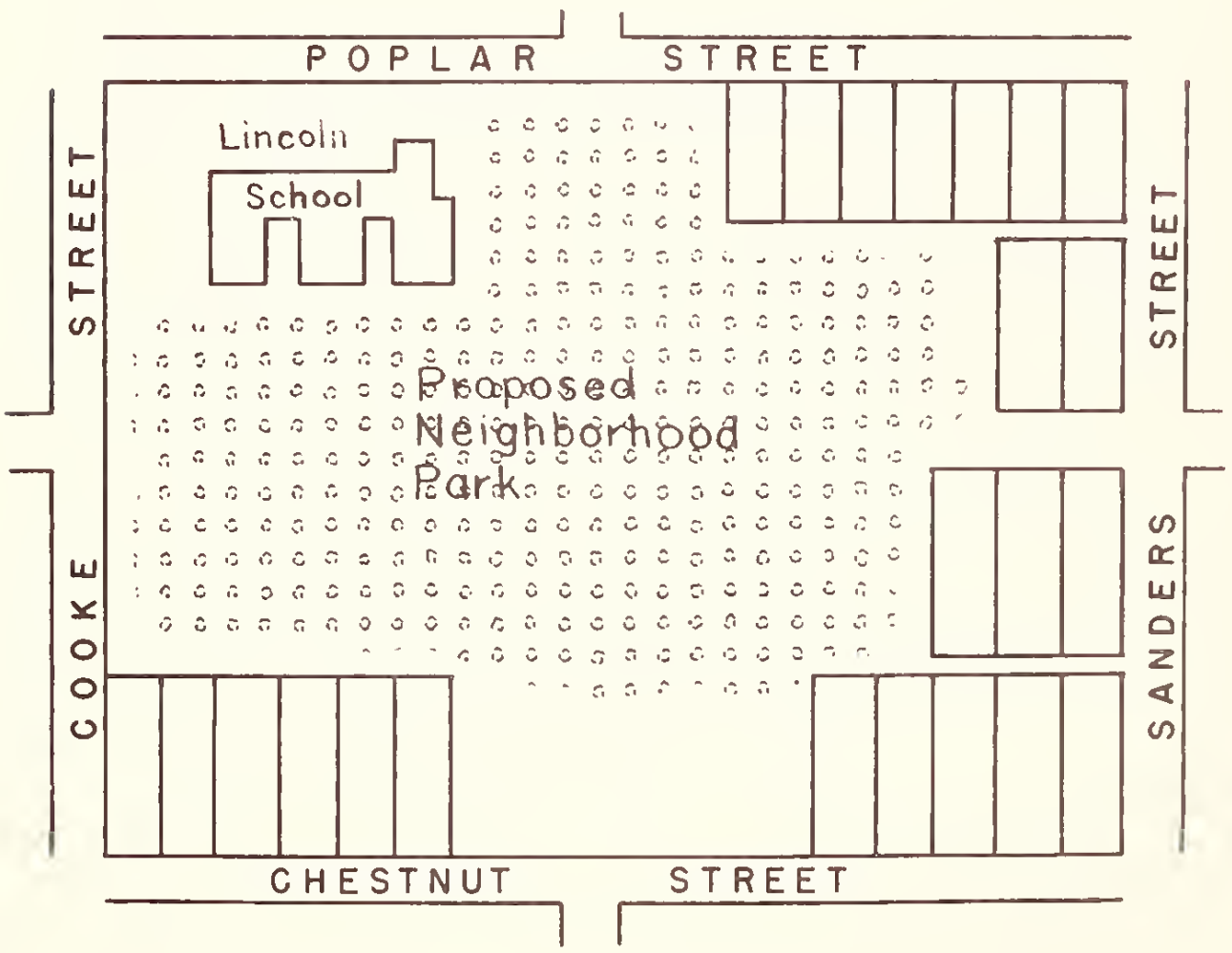
Park on Walnut Street between Cooke and Saunders Streets

Total area---1.5 acres
Facilities---lawn area
Recommendations---purchase remainder of the vacant land in the block

Lincoln School

Total area---2.0 acres
Facilities---1 slide
1 swing set
1 merry-go-round
1 set of monkey bars
Recommendations---purchase remainder of land to east of school site and provide following:

1. corner for pre-school children
2. additional play apparatus
3. open space for informal play
5. area for court games
5. area for field games
6. area for story telling and dramatics
7. shelter house
8. corner for table games for older people
9. landscape features



The Junior High neighborhood has a population of 2,930 persons. This is the central area of the City of Helena and as would be expected has the highest density of population. Also the western fringe of the central commercial district is in this neighborhood. In the northwestern part of the neighborhood is the Memorial Park, with an area of approximately 21 acres. There are two other small parks in addition to the Memorial Park. The park immediately west of the Junior High School contains about 3 acres. This area, however, is presently used for parking, so no recreational use is possible. The other park contains just over 1 acre and is at the intersection of Helena Avenue and Warren Street. The only facility provided is a lawn area. This neighborhood is completely built up so there is little possibility of obtaining additional land for park and recreational use. Land values in this neighborhood would also make the purchase of land prohibitive.

Therefore, the following is recommended: that the Memorial Park be considered as the playground for this neighborhood, and that in the event land should become available, at least 3 acres should be purchased for playground use. This is one area of the community where provision of tot-lots for the younger children may prove of advantage.

Golf-Course Sub-Community

This sub-community contains two neighborhoods and has a population of 2,241 persons. There is the possibility of new neighborhoods forming in the future as this is one of the areas where a residential development is taking place. Now is the time to purchase land for a sub-community playfield while this area is relatively undeveloped. Therefore, it is recommended that a 20 acre tract of land be purchased in the area immediately north of the golf course to be developed at a future date as a sub-community playfield.

The Golf Course sub-community contains these neighborhoods:

1. Carroll College Neighborhood
2. Broadwater Neighborhood

The following is a brief description of each neighborhood and recommendations for future development.

Carroll College Neighborhood

The population of this area is only 324 persons and is located in the eastern part of the sub-community near the Carroll College. There are presently two parks in this neighborhood:

1. the Golf Course with approximately 83 acres
2. the Park adjacent to the golf course on the south containing approximately 2 acres.

Although a golf course is highly desirable and necessary to a recreational program, it is an individual sport, even though the game may be played in groups. It requires the skill of one individual and not that of the total group. Therefore, it cannot take the place of the playfield or the playground in the recreational program.

Park Immediately Adjacent to Southeast Property Line of the Golf Course

Total area---2.0 acres
Facilities---ball diamond
Recommendations---that the area be developed as a neighborhood playground as the residential growth continues

Broadwater Neighborhood

This neighborhood has a population of 1,917 persons. There are no parks or playgrounds in the neighborhood other than the playground facilities provided at the Broadwater school site. The total school site contains 2.3 acres.

The area in the present school site is sufficient to allow development as a neighborhood playground to serve the existing population. However, as this neighborhood continues to grow additional land will have to be acquired in the western portion of the neighborhood.

The following is a review of present facilities and recommendations:

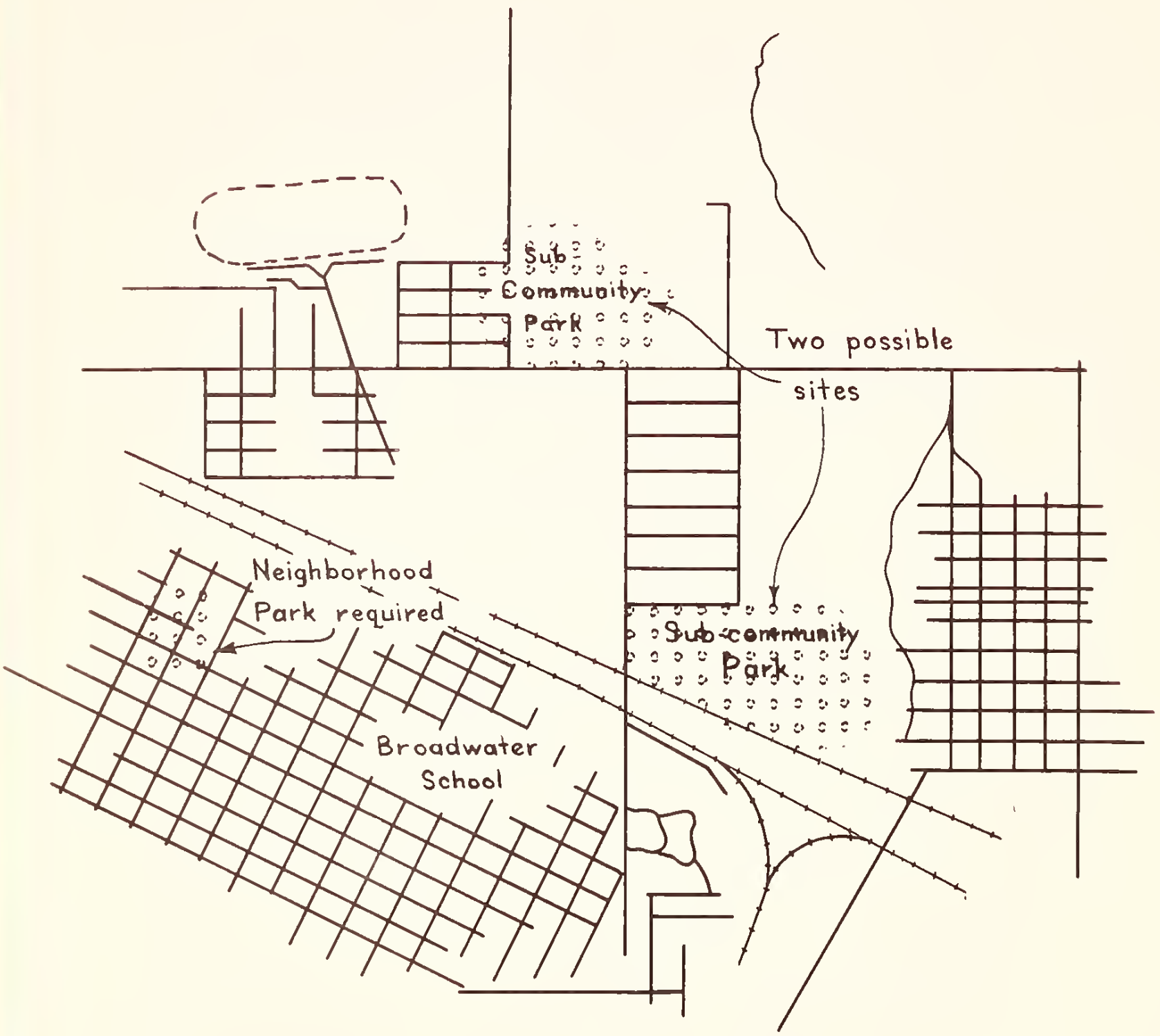
Broadwater School

Total area---2.3 acres
Facilities---1 basketball goal
1 swing
1 merry-go-round
1 slide
2 monkey bars
1 soft ball diamond

Recommendations---that the following facilities be provided:

1. hardsurface area for court games
2. area for small children
3. apparatus for small children
4. additional swings and slides
5. table games for older people
6. sandbox
7. landscape features

Also recommended: that a site be acquired in the proximity of the area shown on the map, as soon as possible before the price of the land increases. Area of the proposed playground should not be less than 3 acres and preferably 5 acres.



GOLF COURSE SUB-COMMUNITY

Southwest Sub-Community

The southwest sub-community has a population of 10,327 persons or approximately one-half of the total population of the City of Helena. In the sub-community the total park acreage is 16 acres. Included in the acreage are some nine parks. Only two of these have an area of more than 3 acres, and both are located in the congested area of the Civic Center, thus precluding the parks' development for playground purposes. A good possibility exists for the development of a 20 acre sub-community park in the vicinity of the City water reservoir. This park could be integrated with the proposed parkway discussed in this report.

The two neighborhoods in this sub-community are as follows:

1. Westside Neighborhood
2. Jefferson Neighborhood

The existing and needed recreational facilities for these two neighborhoods are reviewed in the following paragraphs.

Westside Neighborhood

The westside neighborhood has four parks with a combined total of over 12 acres in park land, and a population of 4,360 persons. This is nearly one-fourth of the total population of the City of Helena.

In addition to the more than 12 acres of park land, the area is served by the new Westside School and the Hawthorne School. The elongated shape of this neighborhood makes it necessary for some of the children to walk three-fourths to one mile to the school play grounds.

Another interesting point to be considered in this neighborhood is that the northwestern sector is composed of large old dwellings; many of these homes have been remodeled into apartments. This contrast in housing is emphasized by the fact that in the newer area the lots are relatively larger with ample play space, while in the older area the population density is greater and the available play space much less.

The Hawthorne School is located on a small site and is presently developed to capacity, while the Westside School is on a much larger site and can be developed as a neighborhood playground.

To accommodate the recreational needs for this neighborhood, it is recommended that the Westside School site be developed as a neighborhood playground, and that approximately 3 acres of land be acquired in the vicinity of the Hawthorne School to serve the high density area. Usually, it is not desirable to have two playgrounds in one neighborhood; however, in this case it is believed to be justified due to the factors mentioned before.

In addition to the two school sites the other park land in the neighborhood is used primarily for passive recreation. The Civic Center Park does have four tennis courts, which are severly lacking in the City of Helena. The parks in this group are the Civic Center Park, Hill Park, and Ladies Park, and are located in the downtown area, thus making use by children undesirable.

The following is a review of existing parks and recommendations:

Civic Center Park

Total area---3.7 acres
Facilities---passive recreational area with
landscaping
wading pool
two tennis courts
benches
Recommendations---remain in present use.

Hill Park

Total area---2.6 acres
Facilities---landscaped area
architectural features
picnic tables
Recommendations---remain in present use.

Ladies Park

Total area---2.7 acres
Facilities---landscaping
architectural features
Recommendations---remain in present use.

Park at Intersection of Floweree and Mauldin Streets

Total area---1.5 acres
Facilities---landscaped
Recommendations---remain in present use.

Westside School

Total area---5.0 acres
Facilities---2 swings
Recommendations---that the site be developed as a neighborhood playground with the following facilities:

1. corner for pre-school children

2. additional swing sets, slides, monkey bars for older children
3. open space for informal play
4. surface area for court games such as tennis, shuffle board
5. area for field games such as football, softball and mass games
6. area for story telling
7. crafts and dramatics
8. shelter house
9. corner for table games
10. landscaping

Hawthorne School

Total area---1.5 acres
Facilities---1 swing set
2 monkey bar sets
2 merry-go-rounds
2 basketball goals
landscaping
Recommendations---that no additional play equipment be added to the school site, but that a park site be acquired in this area of not less than 3 acres, to be developed as a neighborhood playground with the same recreational facilities recommended for the Westside School. This park could be located within the proposed sub-community park proposals for this area.

Jefferson Neighborhood

This neighborhood has the highest population of all with 5,967 persons. This is more than one-fourth of the total population of the City of Helena.

There are five parks in this neighborhood, but the total park acreage is only 3.7 acres. Three of the parks have an area of only approximately 1 acre, and the average size of the parks is 0.74 acres.

There are three schools in the neighborhood: the Jefferson School located in the southeast part of the neighborhood, the Catholic School located in the northwest portion and the May Butler School in the southwestern part of the neighborhood.

There is little possibility of the development of the Catholic School site or the May Butler school site as a playground; however, the Jefferson School site is large enough to accommodate some of the recreational facilities required for a playground.

A review of the parks and recommendations follows:

Park at junction of Main and State Streets

Total area---1.00 acres
Facilities---1 swing set
1 slide
1 water fountain

Recommendations---this is a small park used partly as a play area and partly as a passive recreational area. It is recommended that the park remain in its present use.

Park adjacent to Nurses' Home

Total area---1.00 acres
Facilities---landscaped
Recommendations---to remain in use as passive recreational area.

Park at junction of Beattie and Davis Streets

Total area---1.00 acres
Facilities---landscaped
Recommendations---to remain as passive recreational area.

Park at junction of Ewing and Wood Streets

Total area---0.6 acres
Facilities---wading pool
1 slide
1 merry-go-round
1 teeter-totter
Recommendations---that this park be landscaped.

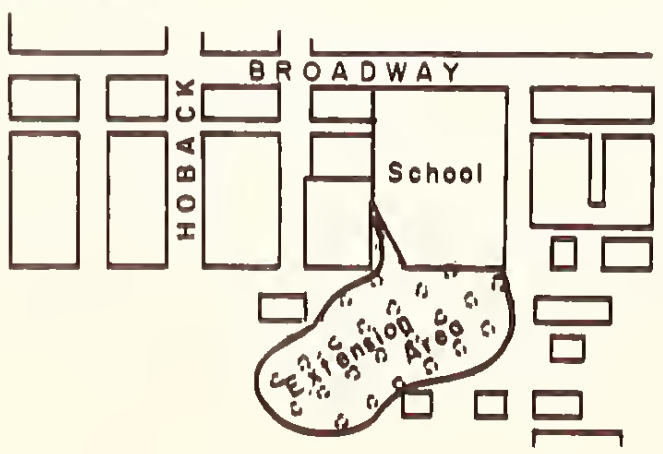
May Butler School

Total area---2.3 acres
Facilities---2 swings
1 monkey bar set
Recommendations---this is a very small site and should remain as developed, although additional landscaping would improve the site. Area is built up with little chance of enlarging site.

Jefferson School

Total area---3.0 acres
Facilities---2 swing sets
1 slide
1 merry-go-round
1 basketball goal
Recommendations---that land be acquired immediately to the south of the school site and that the area be developed as a playground with the following recreational facilities:

1. corner for pre-school children
2. apparatus for older children
3. open space for informal play
4. surfaced area for court games such as tennis, shuffle board
5. area for field games, football, softball
6. area for story telling
7. dramatics and crafts
8. shelter house
9. table games
10. landscaping



City of East Helena

The City of East Helena, as described earlier in this report, has a population of close to 1,471 persons and approximately 5.6 acres in parks. There are four parks, only one of which approaches an area of three acres. This park is already developed as a memorial park, precluding development for playground use. Therefore, none of the parks now existing can be used as a playground. Although the population has not yet reached 2,000 persons, which is the smallest sized neighborhood considered, provision should be made now for a playground. A playground in East Helena would be an asset to the community and provide a considerable amount of enjoyment for the residents of the city. It is thus recommended that an area containing at least five acres be purchased in the vicinity of the creek and to the north of the highway and business district. Following is an evaluation of existing park land.

East Helena School

Total area---1.6 acres
Facilities---1 merry-go-round
1 slide
2 swings
Recommendations---the playground area of the school is sufficient to serve the smaller children, however, not large enough for further development. Again the recreational value of this play area could be greatly enhanced by a lawn area and some trees and shrubs.

Park in Southeast Corner of East Helena

Total area---1.1 acres
Facilities---1 basketball goal
Recommendations---this park is not large enough for intensive development. Therefore, it is recommended that it be used primarily as a tot lot.

Catholic School Playground

Total area---1.1 acres
Facilities---1 basketball goal
1 softball backstop
Recommendations---that the following recreational facilities be provided:

1. monkey bar set
2. swing set
3. merry-go-round
4. landscaping

Park in Central Part of City of East Helena

Total area---0.5 acres
Facilities---none
Recommendations---this park is too small to be considered for intensive development

East Helena Memorial Park

Total area---3.0 acres
Facilities---1 wading pool
2 swing sets
1 slide
1 merry-go-round
picnic tables and benches
landscaping
Recommendations---this is a particularly attractive park and is presently serving the neighborhood as a passive recreational area and as an area for smaller children. This park is completely developed for its size and should remain in the present use.

Future Neighborhoods

Neighborhoods which are most likely to develop in the future are in the area north of the Golf Course sub-community; along Highway No. 91; also to the west along Highway No. 10N. Although the concentration of population in these areas is not sufficient to justify the creation of neighborhood parks at the present time, consideration should be given to the purchase of land in tracts of not less than 5 acres before the land price increases. Often this land can be purchased and leased back to the seller until the park land is needed.

Another method of acquiring park land is to choose the park site and as the area is subdivided, add land to the park site under the requirement that 1/9 to 1/12 of the usuable platted land be donated for park purposes.

Once the land has been acquired, park and recreational facilities can be added as the population of the neighborhood increases. A look ahead will many times not only save money but will allow for the provision of many more recreational opportunities than would otherwise be possible.

Parkway

The parkway or park drive is a specialized type of park use. It is essentially a drive, landscaped mostly with plant materials which are indigenous to the area or with native plants and trees. There are usually picnic areas placed at strategic points with picnic tables and, barbeque pits. Other recreational facilities sometimes provided are swings, slides and sandboxes.

GOLF COURSE
SUB-COMMUNITY

SOUTHWEST
SUB-COMMUNITY

HIGH
SCHOOL
SUB-COMMUNITY

Golf Course
Broadwater
Westside
Lincoln
Junior High School
High School
Roy Bjork
Jefferson
East Helena

SCP
N
M
P
TL

Legend

Tot Lot
existing ● TL
proposed ○ TL

Possive Park
existing ▲ P
proposed △ P

Neighborhood Park
existing N
proposed extension N
proposed – no specific site N

Sub-Community Park
existing SCP
proposed extension SCP
proposed – no specific site SCP

Municipol Park
existing M

Parkway
existing
proposed

Small circles represent one mile walking distance
Large circles represent two miles walking distance
Nomes within circles refer to neighborhood title

Ronald Thompson and Associates
Silver Bow Block —— Butte, Montana

PROPOSED PARKS PLAN
URBAN AREA – 1960

DRAWN GT | CHECKED RT | DRAWING NO. P2
TRACED GT | REVISIONS
SCALE

City, Regional and Economic Planning and Research

The parkway should have a beginning and an end. Sometimes the beginning of a parkway may be an arboratum or floral gardens, and the end a day park. The primary purpose of the parkway is to provide an aesthetically pleasing drive, and a green belt around the built up areas of the city.

The parkway proposed for the City of Helena would extend from the Broadwater Hotel grounds to the proposed Historical Center at the end of the Central Business District.

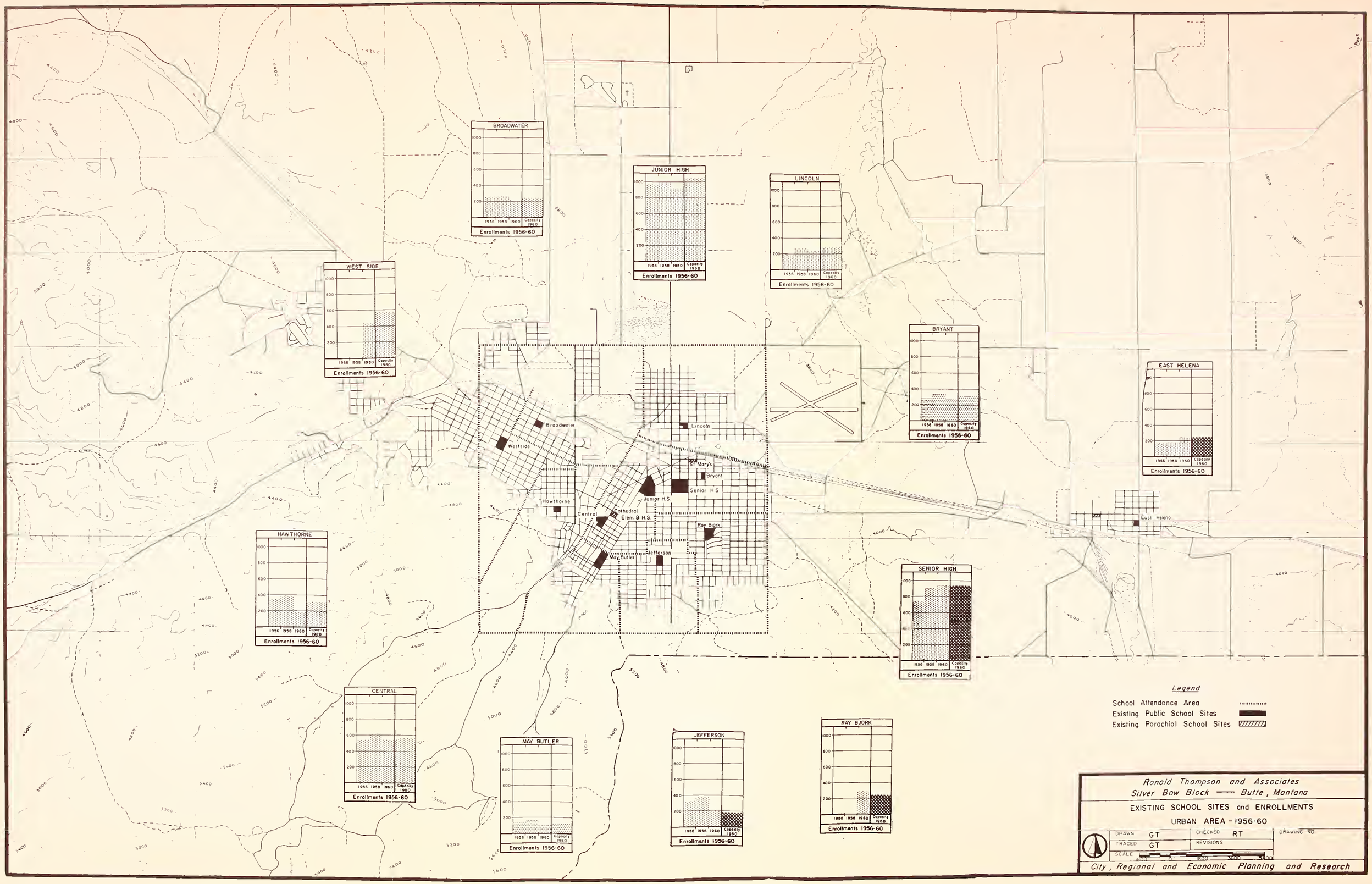
The route of the proposed parkway would follow the already existing Grand Canyon Boulevard along the southwestern outskirts of the city. To develop this road as a parkway would require the improvement of the existing road, preferably to asphalt concrete, and construction of turn-off spaces for parking of automobiles. This in some instances would require fill. This would give a pleasant drive through the trees on the side of the mountain, and a good overlook of the Helena Valley and the mountains beyond. Again it cannot be emphasized too strongly that now is the time to purchase the necessary land. The development of the parkway can be accomplished as monies become available. Many cities have discovered the value of a parkway system too late and have had to spend hundreds of thousands of dollars in the purchase of land.

General Observations on the Helena and East Helena Parks and Recreation System

The City of Helena has 21 parks, a large number of which are very small or less than 2 acres. The only use which can be made of these parks is for passive recreation, rather than the greater need for active recreation for children and adults alike. These small parks are very expensive to maintain because it requires a crew of men to spend a great deal of time moving from one park to another with tools and water hoses for maintenance work. Also the small parks scattered throughout the city require a duplication of recreation facilities. Conversely, one park with sufficient acreage for playground development will make it possible to increase the number of recreational facilities and thereby increase the number of recreational opportunities that can be offered. Some small parks can be enlarged where there

is vacant land adjacent to the park site and developed into a usable play area, in other cases this is not possible.

As the Cities of Helena and East Helena continue to develop, sites in strategic locations, to serve the greatest number of people and of sufficient size, should be acquired. The topography of the sites should permit easy development and each park should be designed for aesthetic appeal and easy maintenance.



Legend

School Attendonce Area

Existing Public School Sites

Existing Porochiol School Sites

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EXISTING SCHOOL SITES and ENROLLMENTS

URBAN AREA - 1956-60

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SCALE			DRAWING NO

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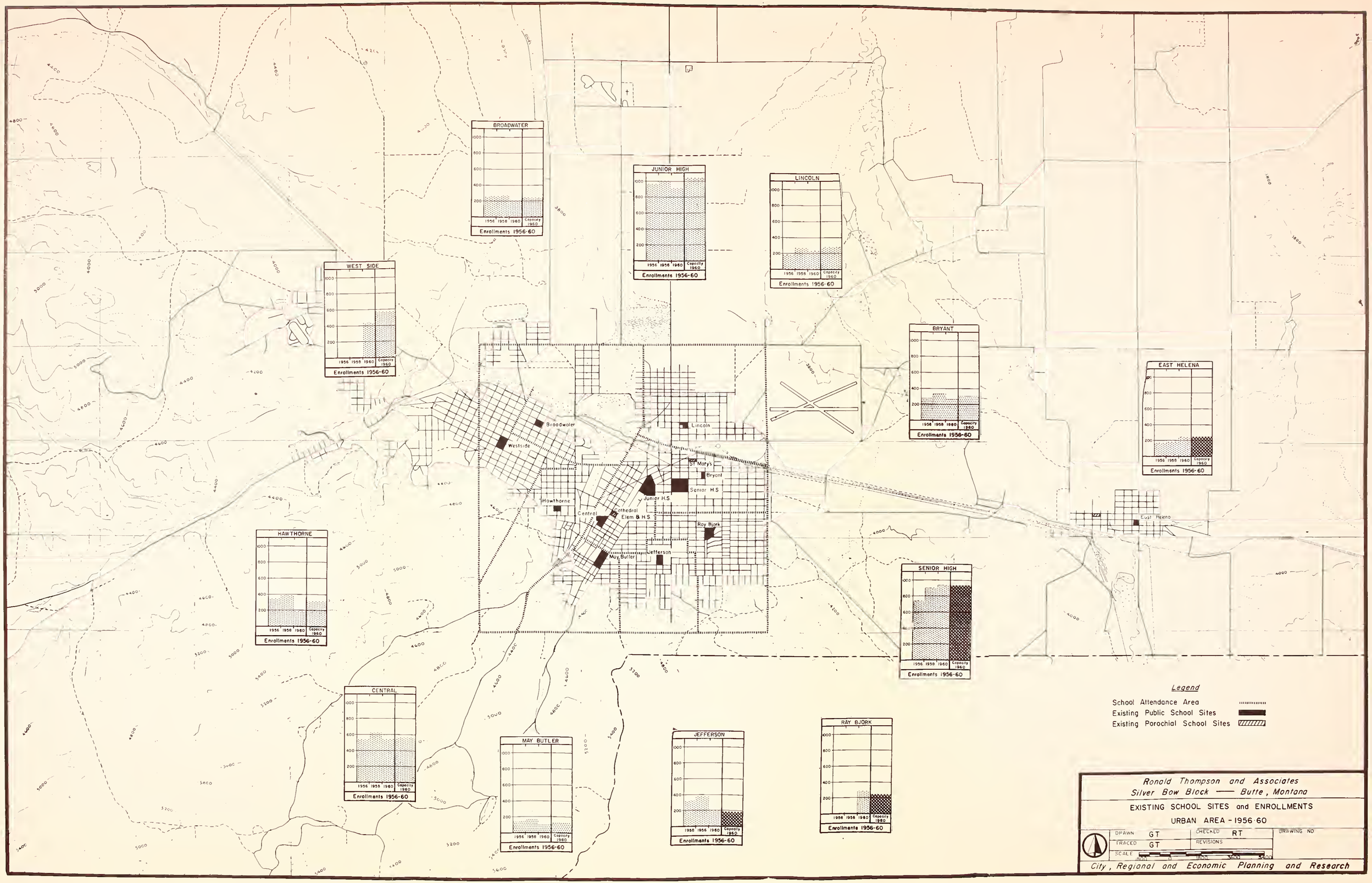

BROADWATER
JUNIOR HIGH
LINCOLN
WEST SIDE
BRYANT
EAST HELENA
HAWTHORNE
SENIOR HIGH
CENTRAL
MAY BUTLER
JEFFERSON
RAY BJORK
1000
800
600
400
200
1956 1958 1960 Capacity 1960
Enrollments 1956-60
Broadwater
Westside
Lincoln
St Mary's
Bryant
Senior H.S
Junior H.S
Hawthorne
Central
Cathedral Elem & H.S
Roy Bjork
May Butler
Jefferson
East Helena
Legend
School Attendance Area
Existing Public School Sites
Existing Porochial School Sites
Ronald Thompson and Associates
Silver Bow Block — Butte, Montana
EXISTING SCHOOL SITES and ENROLLMENTS
URBAN AREA - 1956-60
DRAWN GT
CHECKED RT
TRACED GT
REVISIONS
SCALE
DRAWING NO
City, Regional and Economic Planning and Research

BROADWATER

1000 800 600 400 200

1956 1958 1960 Capacity 1960

Enrollments 1956-60

JUNIOR HIGH

1000 800 600 400 200

1956 1958 1960 Capacity 1960

Enrollments 1956-60

LINCOLN

1000 800 600 400 200

1956 1958 1960 Capacity 1960

Enrollments 1956-60

WEST SIDE

1000 800 600 400 200

1956 1958 1960 Capacity 1960

Enrollments 1956-60

BRYANT

1000 800 600 400 200

1958 1958 1960 Capacity 1960

Enrollments 1956-60

EAST HELENA

1000 800 600 400 200

1956 1958 1960 Capacity 1960

Enrollments 1956-60

Broadwater
Westside
Lincoln
St Mary's
Bryant
Senior H.S.
Junior H.S.
Hawthorne
Central
Cathedral Elem & H.S.
Ray Bjork
Jefferson
May Butler
East Helena

HAWTHORNE

1000 800 600 400 200

1956 1958 1960 Capacity 1960

Enrollments 1956-60

SENIOR HIGH

1000 800 600 400 200

1956 1958 1960 Capacity 1960

Enrollments 1956-60

CENTRAL

1000 800 600 400 200

1956 1958 1960 Capacity 1960

Enrollments 1956-60

MAY BUTLER

1000 800 600 400 200

1956 1958 1960 Capacity 1960

Enrollments 1956-60

JEFFERSON

1000 800 600 400 200

1956 1958 1960 Capacity 1960

Enrollments 1956-60

RAY BJORK

1000 800 600 400 200

1956 1958 1960 Capacity 1960

Enrollments 1956-60

Legend

School Attendonce Area

Existing Public School Sites

Existing Porochiol School Sites

Ronald Thompson and Associates
Silver Bow Block — Butte, Montana

EXISTING SCHOOL SITES and ENROLLMENTS

URBAN AREA - 1956-60

DRAWN	GT	CHECKED	RT
TRACED	GT	REVISIONS	
SCALE			DRAWING NO.

City, Regional and Economic Planning and Research

S C H O O L S

School District I and Helena High School District

The City of Helena, Unionville and former District No. 6 comprise Elementary School District No. 1. Superimposed on this district is the Helena High School district, comprising about three-quarters of Lewis and Clark County.

The districts are administered by a combined school board, with seven members representing School District No. 1, and four from the outlying areas of the High School district. One superintendent and an assistant superintendent head the full-time administration.

Certain of the system's schools are paired under the charge of one principal, and the twelve schools are administered by eight principals. Schools paired in this manner are the Ray Bjork-Jefferson, May Butler-Central, Bryant-Lincoln and Broadwater-Hawthorne.

Facilities

District No. 1 is served by thirteen public school buildings: ten elementary schools, one junior high, one senior high, and the aeronautics school, affiliated with the senior high school. In addition, the School District makes use of one administration building, three possible storage houses and a structure near the Hawthorne School used as the office of the assistant superintendent and an elementary gymnasium.

The District hired 175 teachers and principals in 1958-59. Five teachers, trained in specific fields such as music, travel from school to school. The aeronautics school has six teachers and a principal, while the high school district employs 52 teachers.

A summer school program was inaugurated by District I during the summer of 1960, with 262 students taking part in remedial and make-up courses, credit courses, band, and special courses such as personal typing.

A large and varied adult education program is conducted at the senior high school for over 400 students during the winter months. Upwards of 36 courses are offered from time to time during the year.

The School of Aeronautics and Related Trades, which is administered in conjunction with the senior high school, offers special adult classes in all phases of aeronautics and other trades.

A special education program is conducted during the school year for retarded children. 47 children are in the program this year in three rooms.

East Helena School District 9

The district has its own elementary school with an enrollment this year of 243 students. This district also sent 50 high school students to the Helena High School this year. It is included in the High School District.

Rural School Districts

In the area immediately surrounding Helena there are eight elementary school districts which send a total of 211 elementary school children by bus to schools in District 1. These districts are 2,3,5,6,16,33,43, and 1 outside the city. They pay $200 tuition fee for each child to District 1 in addition to providing the bus transportation.

In addition, there are 122 other junior and senior school students brought into Helena from rural school districts.

The 16 rural schools in Lewis and Clark County are administered by a County Superintendent. Twelve of these schools have only one teacher, although there are 27 teachers in the rural system as a whole.

Parochial Schools

The Helena-East Helena area is divided into three Catholic parishes which are served by 3 parochial elementary schools and 2 parochial high schools. Each of these is under the administration of a Diocesan Superintendent of Schools appointed by the Bishop of Helena. Cathedral High School is part of Catholic Parish, and St. Mary's of the Mount is operated in conjunction with the Good Shepherd Convent.

State Vocational School

Since 1953 the number of high school students at the State Vocational School for Girls has varied between

20 and 39, with the highest enrollment in 1956-57. There were 36 girls at the School this past year.

Enrollments, School District 1

Elementary

The trend of elementary enrollments - grades 1 through 6, has been slowly rising over the past ten years, with an over all increase of 54% in the ten year period from 1950-1960. The rise was steady during the first four years of the decade, remained nearly stationary for two years, then continued another slow and steady rise to 1959. In the last two years there seems to have been a leveling off in the total number of the elementary school children. September, 1960 enrollments total 2,271 students.

Junior High

Junior High School enrollments have been rising slowly since 1953 with a leveling in 1957 and 1958, then a continued rise to and including this year's enrollment of 1,127. This represents a total percentage increase in ten years of 42%.

High School

The Helena High School enrollments have shown a steady rise over the past six years with enrollments in September, 1960 almost on a level with the enrollments in 1959. These September figures are usually revised upwards during the course of the year. Over the past ten year period the number of students has increased by 40% to 919 students.

Past Trends

Each year the number of children completing the sixth grade has been smaller than the number enrolled when the same class entered the first grade; the average decrease being 5.7%.

Seventh grade enrollments, on the other hand, show a consistent increase over the sixth grade, because of the number of students attending Helena's junior high school from outside the boundaries of the City's elementary district. This happens again in tenth grade when additional students come into the senior high school.

There has been an average student drop-out of 20.5% from the 10th through the 12th grades over the past decade.

The total number of children in Helena schools in all grades has increased from 2,816 in 1949, to 4,373 in 1959, a 55% increase in enrollment.

Future Enrollments

District 1

Forecasts of enrollments for the next nine years have been made by a special assistant to the Superintendent of School District 1 during the summer of 1960. These were based on children now in school and on pre-school children now residing in District 1 and in the rural districts which send children into District 1 schools.

According to these estimates, district enrollments in grades 1 through 6 will gradually increase for four years, then level off for five years, with a very small total gain for nine years of 132 pupils or 3.1%.

Junior High School enrollments will increase an estimated 15% during the same period for a total of 296 students. Senior High School enrollments are expected to be nearly level until the 1962-63 school year, then gain. Over-all increase through 1968-1969 will be about 340 students or 37%.

These estimates are based on the assumption that economic conditions in the Helena area will remain substantially unchanged. The Superintendent's office plans to restudy these projections each year to keep them up to date and usuable. This is an excellent study which should prove invaluable to school authorities in the long range planning to meet the educational needs of Helena and its environs.

The growth trends envisioned in the above mentioned report have been checked with the information obtained under this Master Planning program. In general terms the two sets of figures agree. Main areas of difference

are encountered in the Bryant and West Side areas where the planning consultant's projections indicate a lesser build-up than that snown in the School District report. The difference however, is small and may be disregarded.

East Helena

In East Helena enrollments in grades 1 to 8 have increased from 169 in 1951 to 265 in 1959, an increase of 57%. Using the same projection methods used in the Helena forecasts, an increase of 11% might be anticipated by 1965. This increase, shown below, will be tempered by the percentage of existing pre-school children entering Parochial School.

EAST HELENA PROJECTIONS

	Enrollment								
Grades	1	2	3	4	5	6	7	8	Total
1960	33	42	39	31	20	29	28	21	243
1961	33	30	47	38	28	21	34	28	259
1962	39	30	34	46	34	29	24	34	270
1963	30	35	34	33	41	35	34	24	266
1964	26	27	39	33	30	42	41	34	272
1965	28	23	30	38	30	31	49	41	270

Parochial Schools

In September, 1960, there were 152 pupils enrolled at St. Mary's elementary school, 588 enrolled at St. Helena, and 134 enrolled at St. Anne's elementary school in East Helena. At Cathedral High School, 238 students were enrolled in the 9th to the 12th grades, 74 in St. Mary's of the Mount High School.

The proportion of parochial school elementary enrollments to public school enrollments in 1960 averages 26% in Helena, 48.6% in East Helena. Parochial High School enrollments in ratio to public high school enrollments has averaged 9.4% in Helena over the past ten years.

Crowding

Standards for number of pupils per room have been set up by the State Board of Education as a basis for accrediting elementary schools.*

1. In single grade rooms, maximum class load shall be:

   a. Grades 1 and 2.....26
   b. Grades 3 and 4.....28
   c. Grades 5 thru 8.....30

2. Where a teacher has more than one grade in a classroom, the maximum class load shall be:

   a. Primary grades.....20
   b. Intermediate grades.....24
   c. Grades 5 thru 8.....26

According to these standards a total of five elementary classrooms are somewhat over-crowded in Lincoln, Broadwater, Hawthorne, West Side and Central schools. There are also five split classes in five schools.

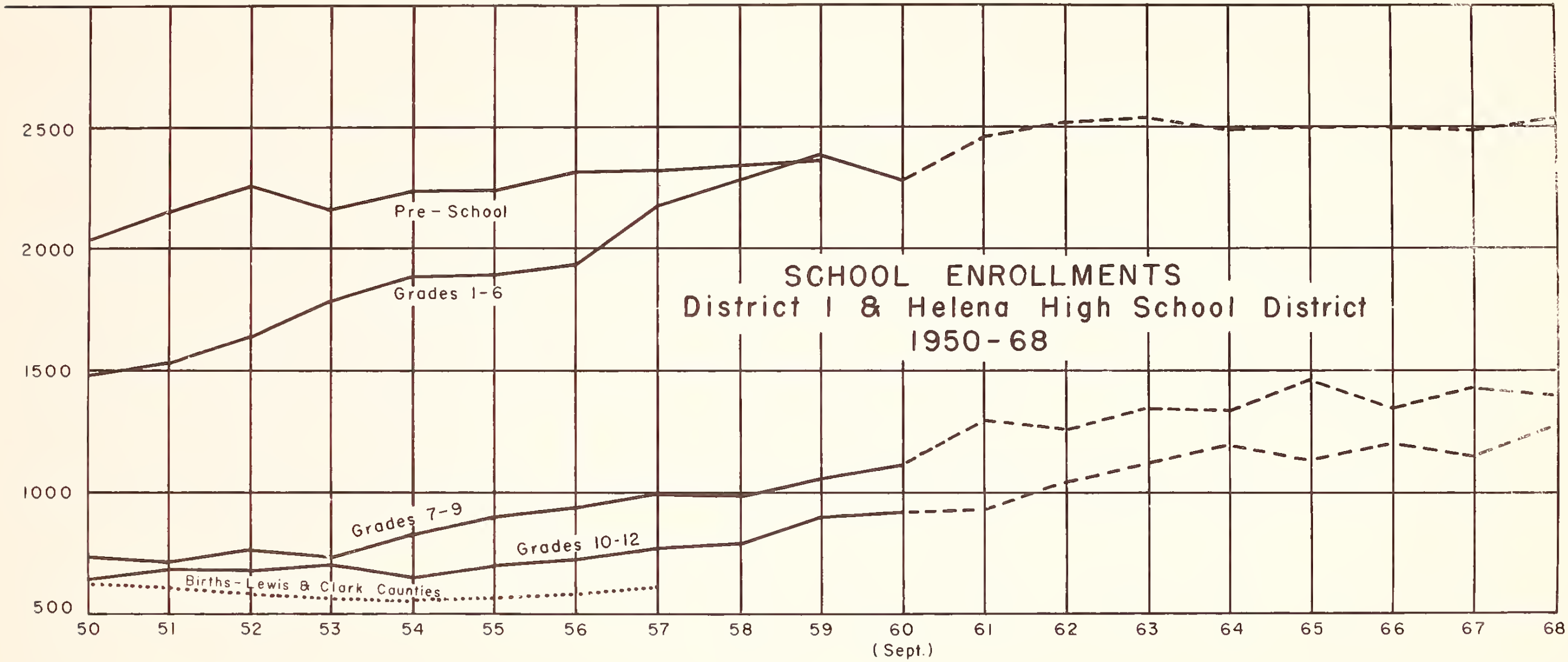
The overcrowding problem in Helena's schools has been relieved with the construction of two new schools during the past year with a total of 33 new classrooms. Two additional class rooms were constructed at Lincoln as well.

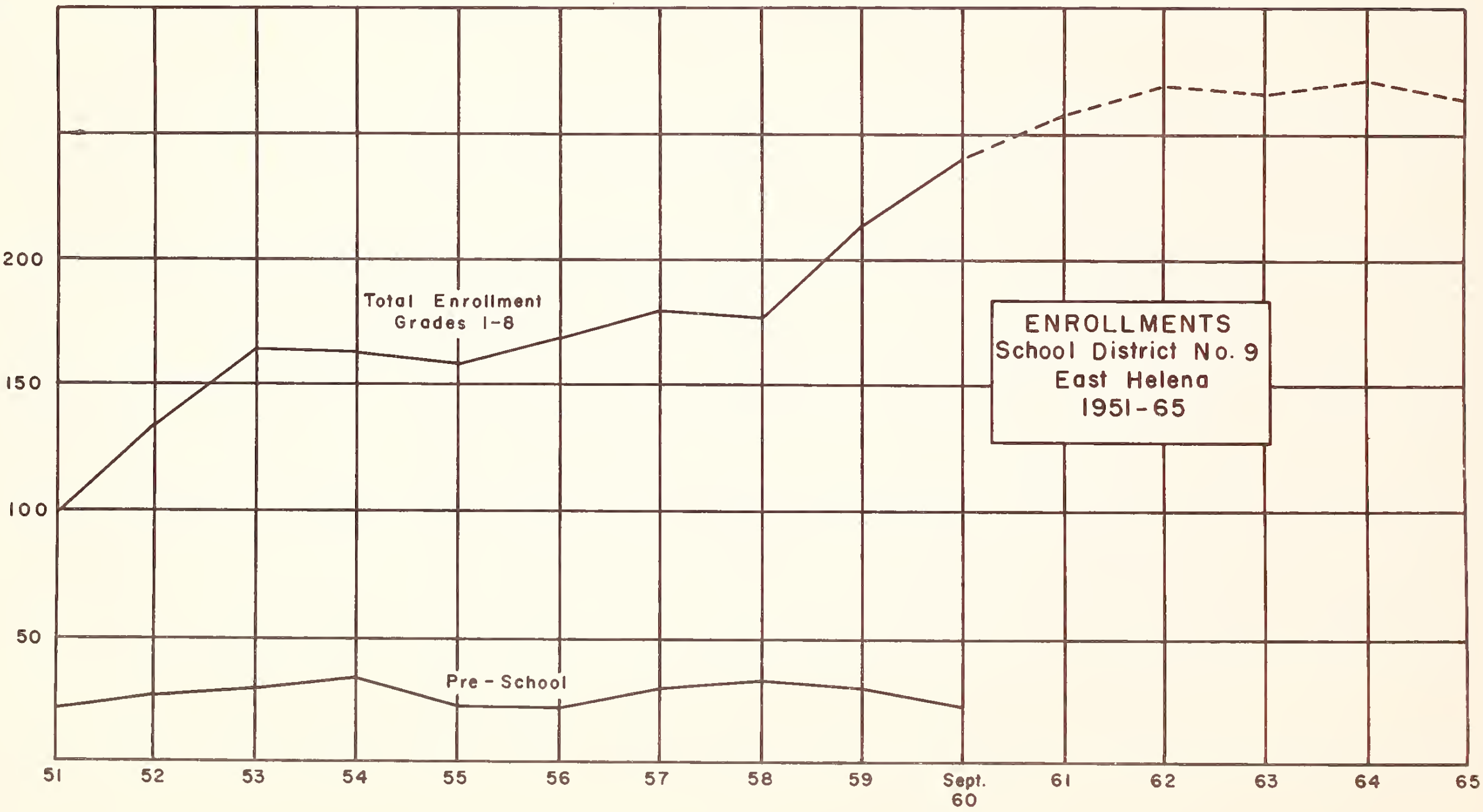
There are 5 such double grade classes in District 1 schools, none of which is overcrowded according to the Standards mentioned above. Two elementary schools are overcrowded, the new Ray Bjork school, which has more students than the Board of Education's standard, and the Jefferson School, which has 16 more students than standard. The Senior High School will be operating at capacity next year, and the Junior High school is expected to be at capacity in three years.

At the Lincoln, Broadwater, Hawthorne, West Side and Central schools there are a few individual grade classes which are overcrowded by State standards.

*These standards were adopted July 13, 1959, and are to be put into use as a basis for accreditation in the Spring of 1961. These are generally considered overly stringent.

SCHOOL ENROLLMENTS
District 1 & Helena High School District
1950-68




ENROLLMENTS
School District No. 9
East Helena
1951-65
Total Enrollment
Grades 1-8
Pre - School
200
150
100
50
51
52
53
54
55
56
57
58
59
Sept.
60
61
62
63
64
65

Some of the schools, however, have vacant classrooms, namely Bryant, Hawthorne and Lincoln schools. In addition to these there are 5 rooms in the old Jefferson school building, which are maintained on a stand-by basis.

Generally speaking, grades 4,5,6, and 9 have the heaviest concentration of pupils. The enrollment forecast study made by the school administration summarizes new classroom needs in the light of enrollment trends to 1969.

Briefly, the projected enrollments from the 1959-60 school year through the 1960-69 school year were as follows:

	1960-1961	1961-1962	1962-1963	1963-1964	1964-1965	1965-1966	1966-1967	1967-1968	1968-1969
Grades 1-6 Elementary	2,432	2,453	2,507	2,524	2,498	2,481	2,491	2,488	2,507
Grades 7-9 Junior H.S.	1,193	1,289	1,251	1,336	1,317	1,448	1,334	1,408	1,382
Grades 10-12 Senior H.S.	910	922	1,021	1,110	1,193	1,118	1,198	1,139	1,252
Totals	4,536	4,664	4,779	4,970	5,008	5,047	5,023	5,035	5,141

Note: The 1959-60 school year figures represent peak enrollments while actual figure enrollments during the year were around 92% of these figures. This percentage difference becomes less and less each year, making the figures shown for the 1963-64 school year very close to the average enrollment for that year.

A study of the above chart indicates that the elementary grades enrollment (grades 1-6) will gradually increase for the next four years and then level off for the next five years. This indicates an increase of 132 pupils in enrollment for these grades over a ten-year period.

An examination of the Junior High School enrollment shows a more rapid increase in enrollment with an overall increase of 296 students over a ten-year period.

A study of the Senior High School enrollments shows that the next two years will be about the same with the big increase starting in the 1962-63 school year. Over

the next ten years, an increase of 340 students is indicated.

The present rate of movement into the Helena Valley and surrounding area could change this enrollment projection. Population projections are subject to all kinds of errors, so they should be kept up to date each year. Year by year we should watch for deviations and make future corrections.

Assuming that the projected enrollments through the year 1968-69 are correct, what additional classrooms are needed? The present approximate capacities of our school buildings are:

	Standard classrooms now available	Student Capacity if filled to average of 25 students each	Number of sub-standard rooms available now	Total Capacity if all rooms are used
Elementary (1-6)	90	2,250	21	2,775
Junior High (7-9)	49 (not counting gym, 3 aero. school)	1,275	at capacity now	
Senior High (10-12)	28 (in Sr. High not including gyms, 3 rooms at aeronautics school)	875	at capacity now	

The elementary school enrollment appears to be approaching a period of leveling off for the next ten years with an average enrollment in grades 1 through 6, of around 2,500 students. An examination of the chart above indicates that if some of the sub-standard rooms are used, there will be enough classrooms available. The biggest problem will be distribution of pupils. With some areas of the city growing faster than others, and some schools now filled to capacity - it will probably be necessary to build some additional classrooms on some of the schools and also study the distribution of pupils and attendance areas.

The Junior High enrollment projection, especially beginning with the school year 1963-64, indicates that

some additional classrooms will be needed. An increasing number of people moving into the areas bordering the City of Helena could change this projection. A study of the Junior High School enrollment should be started with some plans for building in the next three years in mind.

A look at the projected enrollment for the Senior High School indicates that it is now operating at near capacity. Some additional classrooms will be needed during the 1962-63 school year, and especially during the 1963-64 school year, or a lenghthening of the school day made to provide for a partial double-shift school.

An extended school day program would make it possible for the present Senior High School facilities to absorb about 175-200 additional students, and 8 to 10 more teachers. It would make the present building adequate for the present projected enrollment through the school year 1963-64, when the anticipated enrollment will be 1,110.

An extension of the school day, with some classes starting at 8:00 a.m., and with some classes scheduled from 3:45-4:45, would make an additional 52 classrooms available during the school day.

In an extended school day program each student is required to spend six hours in school as at present, and each teacher is required to be at school for six hours, as at present, with five class assignments. In the case of both teachers and students, some would report at 8:00 and leave at 2:45, some would report at 9:00 and leave at 3:45, and some would report at 10:00 and leave at 4:45. It would be necessary that all students in the early and late periods be town students, and that there would be no conflict with existing bus schedules, as it is felt at the present that a change will not be required in the schedules of the elementary or junior high schools in the immediate future.

School Location and Future Requirements

Below is a review of the principles and standards for school location by which school administrators and planners are guided in planning school expansions.

1. Children of elementary school age should not be required to walk farther than one-half mile to reach school.

2. Children, particularly those of elementary school age should not be required, unless it is unavoidable, to cross railroad tracks or streets carrying heavy traffic.
3. Children should not be required to cross business or industrial districts to reach school, unless the intermingling of residential and commercial development makes this unavoidable.
4. Schools should not be located next to industrial areas, railroads, or any use which is detrimental to the operation of the school.
5. School locations should be integrated, insofar as is possible with any park system in order to minimize duplication of recreational facilities.

The service or attendance area of an elementary school which is located according to these principles, would be similar in many ways to a residential neighborhood, perhaps bounded by traffic arteries, but not bisected by them. Ideally, interior neighborhood streets should be service roads for the area's residents. The street patrolling problems in the school zone thus are minimized, and through traffic on the outskirts is not held up by 15-mile-an-hour speed zones and pedestrian crossings. The school at the center of this neighborhood is well protected and easily accessible to resident children within a half-mile radius, more or less. In practice this ideal is often unobtainable, but it is well to have the goal in mind, particularly in undeveloped areas.

The city's major street pattern forms a skeleton framework within which desirable school locations can be mapped out. From the population and physical data that is gathered and mapped by the Planning Board, estimates can be made of total population for an area. When the area accommodates as many people as it possibly can under expected density patterns, this estimated total is called the saturation population.

The estimated saturation population and the rate of growth projection up to this population level is used to determine the number of children in a given area at some future date. Out of these data, the projected need for schools in terms of location and size can be estimated.

Capacity by School

Jefferson School

Within the Jefferson School attendance area in the vicinity of the Capitol, 1,600 persons are estimated to

Comparative School Facilities - Helena-East Helena

SCHOOL	Year Built	Site Size in Acres	Classrooms	Facilities	Enrollments Oct. 1960	Capacity	No. of Teachers	No. of Grades
OLD JEFFERSON	1891	-	5	----	Retired From Use			
HAWTHORNE	1921 1937	1.5	11 (7 in use)	Auditorium	188	306	7	1-6
CENTRAL	1915 1921	5		Auditorium	544	562	22	1-6
BRYANT	1937	1.2	10 (1 vacant)	Auditorium	262	300	10	1-6
BROADWATER	1942	2.5	9	Auditorium and Library	217	248	9	1-6
MAY BUTIER	1942	2.3	5	Auditorium	118	124	5	1-3
LINCOLN	1946 1959	2	10 (1 vacant) (1 vacant in annex)	Auditorium	234	276	8	1-6
NEW JEFFERSON	1948	3	7 (plus 1 in playroom)	Auditorium	202	186	8	1-6
RAY BJORK	1959	4.6	10 (plus 1 in basement)	Multi-purpose Room	282	244	11	1-6
WEST SIDE	1960	5	22	Auditorium; Gymnasium; Industrial Arts; Home Economics; Recreation Rooms; Library.	437	572	18	1-8
JUNIOR HIGH SCHOOL	1935	10.2	35	Auditorium; Gymnasium; Study Hall; Library; Three Special Classrooms; Two Shops.	910	1050	50	7-9
SENIOR HIGH SCHOOL	1955	12.3	27	Gymnasium; Library; Two Music Rooms; Two Publications Room; Theatre; Two Special Class Rooms.	935	At Capacity	45	10-12
EAST HELENA	1890 1917 1935 1955	1.6	11	Gymnasium; Teachers' Room; Laboratory; Lunch Room; Remedial Room.	243	248	11½	1-8

reside at the present time. When this area is completely built up it could hold an additional 500 to 700 persons. Any additional school children could in all probability be taken care of between the Jefferson and the Ray Bjork schools, particularly if another school is built to the east of California Street as that area develops.

Ray Bjork School

This attendance area is now estimated to contain around 1,800 residents, and has enjoyed the greatest growth of any residential area in Helena in past years. When it is fully built up with the medium density type of development which is now characteristic of the area, another 2,000 people could be accommodated there. This is the area where most of the residential growth should occur.

At the present time Ray Bjork school, only completed in 1959, is overcrowded with one classroom in use in the basement. There is room for only four additional classrooms on this site. These would accommodate from one hundred to one hundred twenty more children.

Clearly a new school building will be required southeast of the Ray Bjork school in the not far distant future. It is recommended that a site east of California Street be acquired to accommodate this growth.

In the meantime, additional classrooms at the Ray Bjork school would relieve the present crowded condition in this attendance area.

Bryant School

This school has been relieved of previously existing crowded conditions by the construction of the Ray Bjork School. With a drop in its enrollment since 1958 of 70 students, the school now has one vacant classroom. Population in the attendance area is estimated at 2,050, and is not likely to increase markedly as the vacant land will probably be developed largely for use commercially.

Lincoln School

The area north of the Northern Pacific tracks in the Lincoln School attendance area will be affected

greatly in its future development by the construction of the Inter State Highway, and its access road along Cedar Street.

The Inter State will follow a northwest direction from Prospect to Custer along the eastern edge of the neighborhood. An interchange will be built at Cedar Street which will connect with Main Street at Montana Avenue.

This network of heavy traffic arterials and highways will cut up the Lincoln School neighborhood, very effectively separating the residents in the area north of Cedar on both the east and west sides of Montana Avenue from the school itself. At present there are perhaps 322 persons living in the section north of Main Street and west of Montana Avenue, 170 living on the east side of Montana and north of Cedar, 150 living west of Montana Avenue and 880 living east of Montana Avenue in the immediate vicinity of Lincoln School between the railroad tracks and Cedar Street. A population of about 500 will be cut off from the school by the proposed heavy traffic highways. This will be a serious hazard for primary and intermediate grade children.

If these two areas are fully built up to a medium residential density, somewhere between 1,500 and 2,000 more residents may be anticipated. For such a large group of school children some type of overpass must be provided to get them safely across the four lane Cedar Street access road from the Inter State Highway.

Eventually as areas to the north develop residentially, a new school will be required in the area north of Custer and west of Highway 91. There is already considerable residential development at the Eiler's Corners area and some suburban development along Highway 91 towards Great Falls. The local school authorities are already considering a school site in this area.

Broadwater School

On the west side of Helena the Broadwater School serves an area which extends across the Northern Pacific tracks to include the "Sunhaven" development. While there are very few people presently living in "Sunhaven" this area is expected to develop fairly rapidly. Saturation would mean perhaps 1,000 more persons there. The

crossing of the Northern Pacific tracks is, of course, undesirable for elementary school children, and a school site has already been reserved for an elementary school by the sub-division developer. How soon this will be needed is difficult to determine.

South of the tracks, in the vicinity of Broadwater School, there is relatively high density housing covering most of the area. At most, there is room for 200 more people to locate here. Estimating the present population at 1,800, population of the area when fully developed, would be no more than 2,000.

West Side School

This attendance area has a population of around 1,400 people. There is room for an additional 2,600 people to the west if the area were fully developed. However, this growth has been inhibited in the past by lack of sewer facilities and indications for future growth are not very favorable, beyond filling in already established subdivisions.

The West Side School has an enrollment of 437 in eight grades. The School Board plans to add a ninth grade, making this a complete Junior High School. There is plenty of room for additional classrooms as and when they are needed.

Hawthorne School

This school area has an estimated population of 3,200 with a large number of pre-school children. Seven of its eleven classrooms are in use now since opening of the West Side School drained off some of its school population. Little new growth can be expected in this almost fully developed area of high value homes and converted apartments.

Central School

This school is located in a very high density residential area with a high percentage of apartments and borders the downtown area. While there is little room for new residential development, this area has a very large number of pre-school children. The school is crowded now even with the library being converted to a classroom. However, the enrollment of 544 is lower this

year than it has been since 1956. For the last two years enrollments have been decreasing from the high point of 627 in 1958. The number of five-year-olds in the attendance area in 1959 was little more than half the number of five-year-olds in 1958. The school seems to have adequate space for the foreseeable future.

May Butler School

This school is a small school with only 3 grades and an enrollment of 118 this year. The population in its attendance area is close to 1,900. This is an area of older homes and some converted apartments. There are many single persons within the attendance area, many of them employees at the Capitol, and there has also been some construction of new apartments. Expansion to the south is possible in a limited area. Generally speaking, no great growth of school population is expected in this area.

East Helena

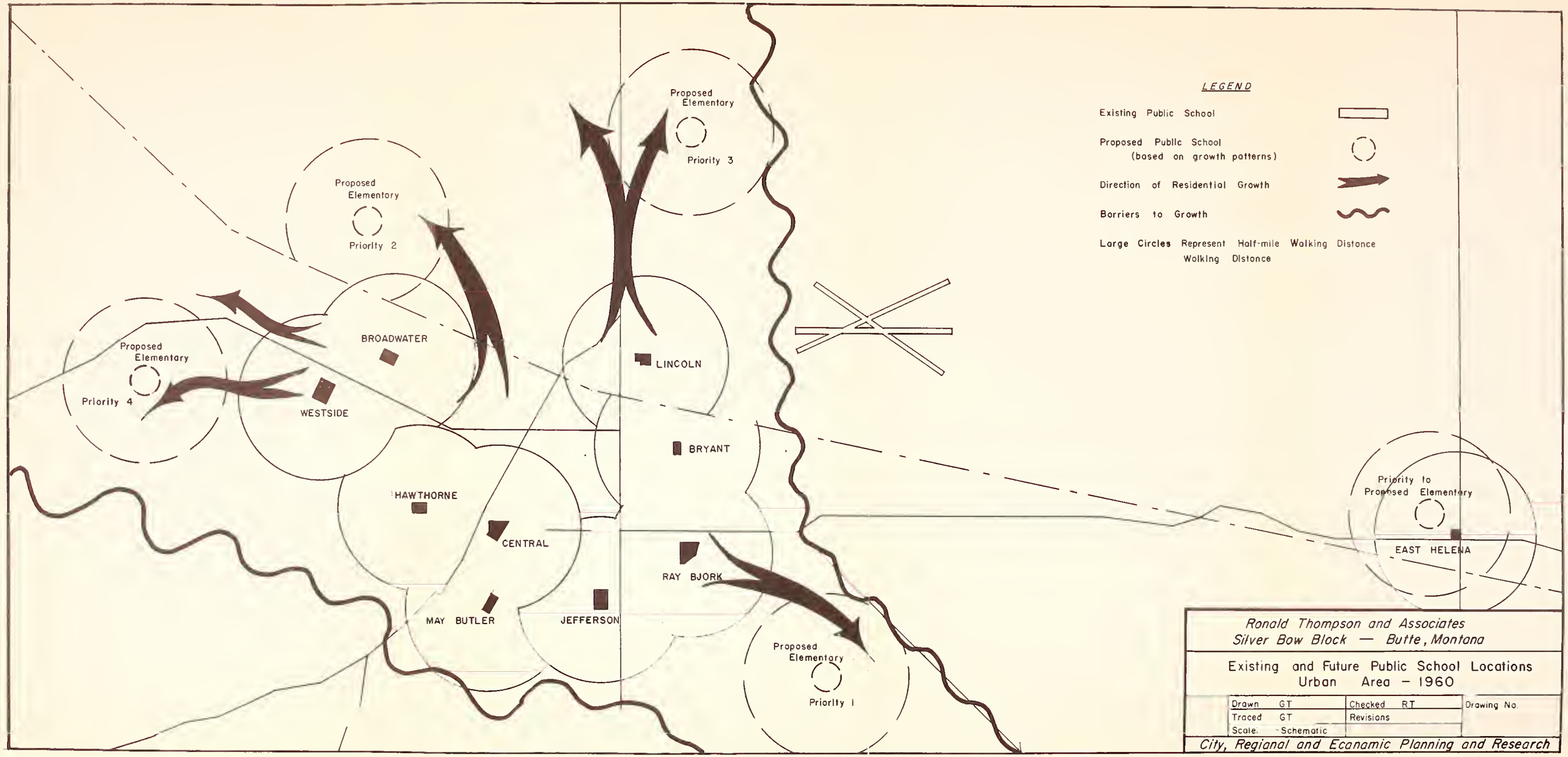
This plant is crowded now, and indications are that the situation will become rapidly worse. There are 11 classrooms for eight grades, a kindergarten, and a room for remedial math and reading. There are 38 children of kindergarten age. Only nineteen of these are attending school at the present time. In January, the other 19 will replace this group for the balance of the school year.

There is one combined classroom of third and fourth grade children, which is not overcrowded by State standards. However, the first and second grades are overcrowded with 34 students in second grade. Next year there may be as many as 38 pupils in first grade, which will conflict with State standards of a maximum of 26 students, in first and second grade rooms.

The woodworking program was suspended in 1959 due to lack of space. A wonderful job has been done at the school in utilizing the last inch of available space; remodeling basement storage rooms for classrooms and laboratories, excavating additional basement space for a large lunch room. But the limit of expansion seems to have been reached on this site. There is no room for additional classrooms here.

There are several possible solutions to the problem among which the citizens and the School Board of East Helena, will have to make a choice. These are tabulated below:

1. construction of a new school building, either to replace the existing old building or to provide classroom space for part of its students. In this connection, the school district has already purchased a site for construction of a new elementary school.
2. to send Junior High School grades into Helena, paying tuition to District 1. This would relieve the situation for a few years.
3. consolidation with District 1, retaining present school for the lower grades and sending higher grades into Helena as crowding situation demands.


LEGEND
Existing Public School
Proposed Public School (based on growth patterns)
Direction of Residential Growth
Borriers to Growth
Large Circles Represent Half-mile Walking Distance
Proposed Elementary
Priority 3
Proposed Elementary
Priority 2
Proposed Elementary
Priority 4
BROADWATER
WESTSIDE
LINCOLN
BRYANT
HAWTHORNE
CENTRAL
MAY BUTLER
JEFFERSON
RAY BJORK
Proposed Elementary
Priority 1
Priority to Proposed Elementary
EAST HELENA
Ronald Thompson and Associates
Silver Bow Block — Butte, Montana
Existing and Future Public School Locations
Urban Area — 1960
Drawn GT
Traced GT
Scale. Schematic
Checked RT
Revisions
Drawing No.
City, Regional and Ecanamic Planning and Research

Central Business District

The Central Business District is the very heart of a city. It is within this core that we find concentrations of retail stores and offices, financial, medical, legal and entertainment services, and many other local and regional facilities.

In the case of the City of Helena, central business district development over past years has been influenced by one primary design factor: topography.

The first effect of topography has been to channel new downtown growth along Main Street to the north. Very few commercial uses have spread up to the top of Last Chance Gulch.

The second effect of the topography of the urban area has been the evolution of a fan-type of growth, with most of the population increase occurring to the north, east and west of the downtown area.

At this time over 86% of the total population of the Helena urban area lives to the north of an east-west line drawn through the Placer Hotel. If past trends continue, the future for Helena's central business district is not bright. This statement is made for the following reasons:

1. The downtown commercial area now consists of approximately eight blocks of property north and south on Main Street with a four block strip of downtown area uses crossing Main at 6th Avenue.
2. This elongated type of development is not conducive to pedestrian shopping. Central areas must be compact, with ease of circulation to permit shoppers to study merchandise and to enjoy the attributes of downtown.
2. The evolving "fan shape" of development of the City will undoubtedly lead to decentralization of commercial enterprises. As quoted before in this report: "in the fan-shaped city the market moves furthest from the core; it is easier for trading centers to "get between" the buyers and the market place. In a society which wants to save time and effort a buyer will not go "down town" to get goods when he can get the same goods at the same price with less effort and travel".
3. Lack of terminal parking space and vehicular congestion in the down town area is causing more people to turn away from shopping there.
4. The poor condition and appearance of some of the downtown blocks is not promoting the feel of "glamour" that "downtown" should aim for. This should not be taken as

depreciating the immense amount of first class downtown remodeling that has taken place in the past years. This activity should be placed on the credit side of the problem.

The statement that "the future for Helena's central business district is not bright" is intended to shock. It is qualified by the words "if present trends continue". It should be obvious that these trends must be changed as no city can afford the financial loss caused by a declining business district. It is thought that the approaches to rejuvenating downtown should be:

1. To improve accessability; not only within the urban area but also from other points within the broad region.
2. To build up major visitor attractions, including entertainment and cultural centers, exposition and convention facilities, adequate hotels, and a well advertised variety of shopping advantages.
3. To develop the optimum compactness necessary to carry on the great range of inter-relationships between activities that characterize a regional center--the prime requisite being ease of internal circulation.
4. To achieve the greatest possible physical attractiveness consistent with the objective of compactness, including the development of aesthetic advantages, the engineering of separated means of circulation, and the creation of focal points of interest.

Land Use

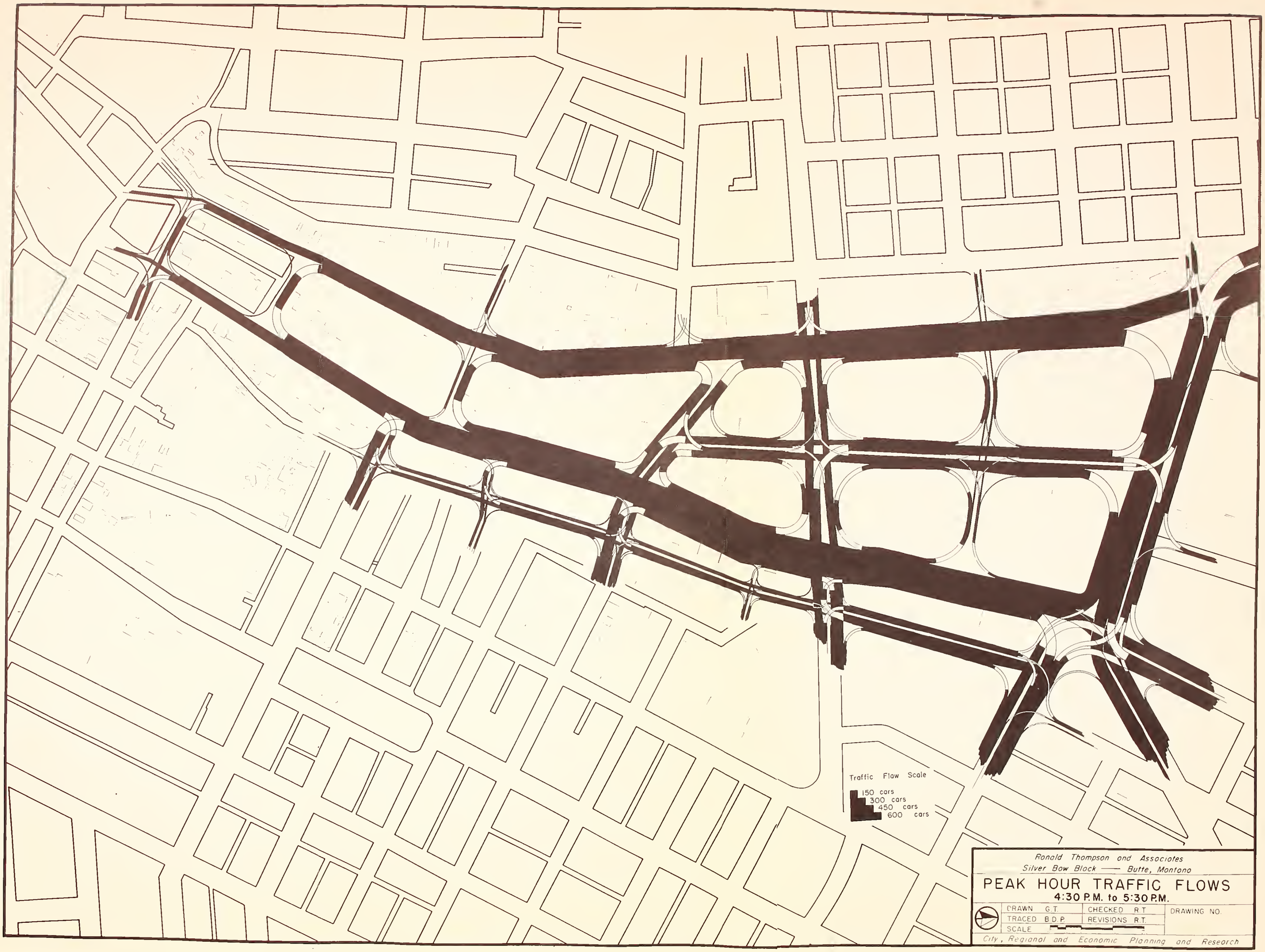
The central commercial area of the City of Helena extends from State Street north to Neill Avenue and is bounded on the west by Park Avenue and to the east by Jackson Street.

This area, although predominantly commercial, does not represent "downtown". Downtown, with its concentration of retail outlets and service establishments covers an approximate seven block area bounded by Edwards, Main and Lawrence Streets and Park Avenue. Outside this area is a mixture of commercial, residential and industrial uses falling into the catch-all zoning classification of "General Commercial".

Growth of the entire commercial area is restricted in the following ways:

To the North

By the Civic Center, Hill, and Ladies Park, the Great Northern depot, and incompatible commercial uses.



Ronald Thompson and Associates
Silver Bow Block —— Butte, Montana

PEAK HOUR TRAFFIC FLOWS
4:30 P.M. to 5:30 P.M.

DRAWN G.T.	CHECKED R.T.	DRAWING NO.
TRACED B.D.P.	REVISIONS R.T.	
SCALE		

City, Regional and Economic Planning and Research

To the South

By a blighted area of mixed commercial, industrial and residential uses.

To the West

By excessive grades, and the Federal Court House.

To the East

By excessive grades, blighted residential, industrial and commercial uses, the Central school and St. Peter's Hospital.

The location of the two types of commercial land use and the barriers to expansion are shown diagramatically on the following page.

One of the prime objectives in the preparation of a new zoning ordinance for the city must be the development of a special district for central business district uses rather than the present districting which permits all commercial uses. The reason for this is that some degree of concentration of uses into the core area will permit a more attractive environment for "glamour" shopping.

Central district merchandising is based on pedestrian patronage, and therefore, uses that generate heavy vehicular traffic or are not retail or service establishments, would probably be better served by being in the outlying General Commercial District.

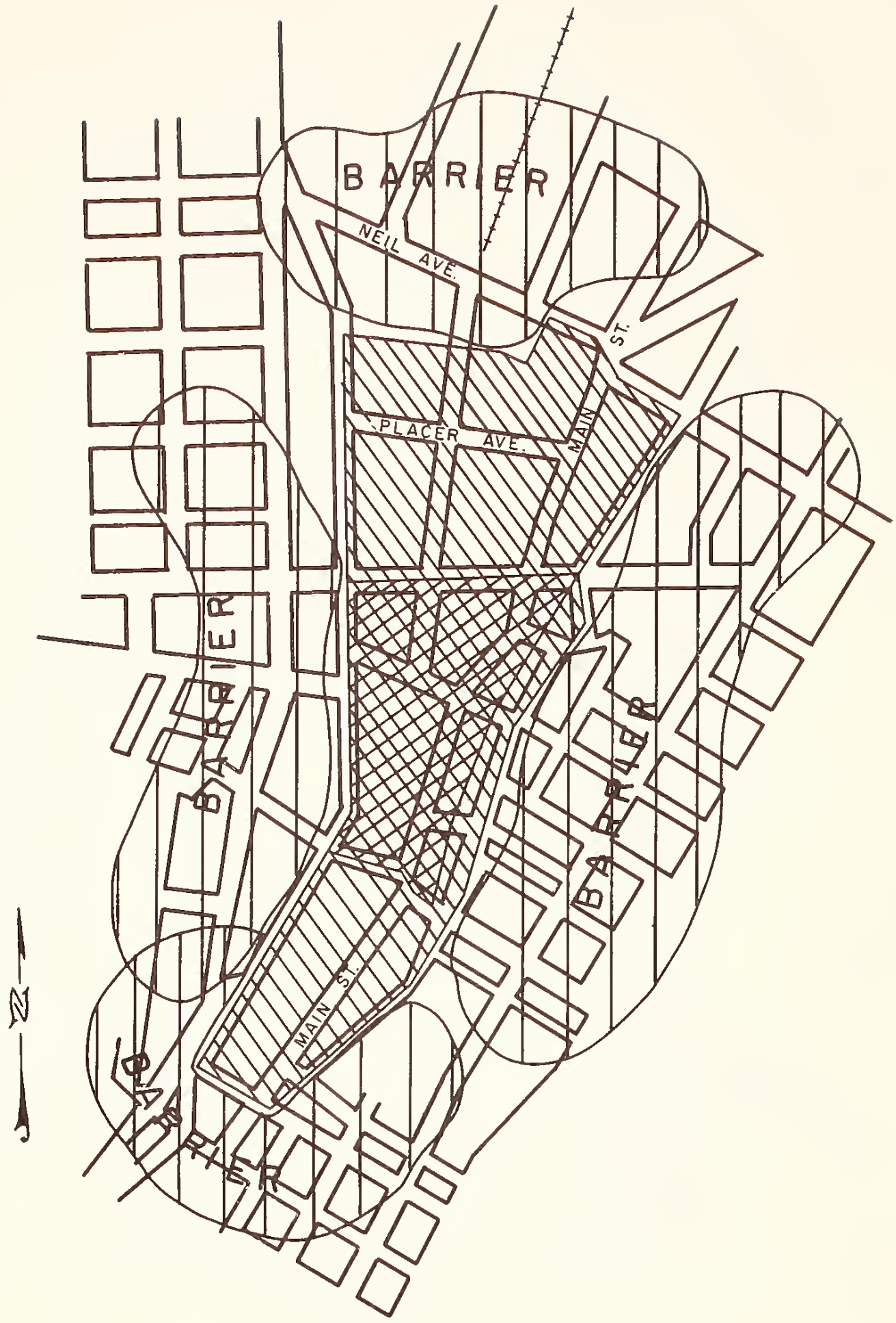
Among such incompatible uses are:

Automobile storage and parking
Filling stations
Garages and auto shops
Laundries
Lumber Yards
Plumbing and heating shops
Wholesale stores

Traffic

During 1959 and 1960 a detailed study of Central Business District traffic flows was made. The results of these counts are shown on the facing map. The flows were obtained as a 4:30 to 5:30 p.m. peak hour count and then converted to an average summer month peak hour basis by means of continual master counts carried out in June, July and August, 1959.

The heaviest peak hour traffic volume encountered was on Main Street between Lawrence Street and 6th Avenue. An average of over 800 vehicles was counted during the 4:30 p.m. to 5:30 p.m. peak period. The second


BARRIER
NEIL AVE.
ST.
PLACER AVE.
MAIN
BARRIER
BARRIER
MAIN ST.
BARRIER
N

INTERSECTION CAPACITY
1960 -- 1975

LOCATION STREET	TRAFFIC DIRECTION	% GREEN	DESIGN CAPACITY	1960			1975			
				Volume	Excess	% Efficiency	Volume	Excess	Deficient	% Efficient
6th Avenue	S	60	900	794	106	12	1191		291	32
&	E	40	250	230	20	8	345		95	38
Main Street	W	40	250	110	140	56	165	85		34
6th Avenue	N	60	975	600	375	38	900	75		8
&	E	40								
Park Avenue	W	40	600	195	405	67	275	335		56
6th Avenue	N	60	275	200	75	27	300		25	9
&	E	40	200	230	30	15	345		145	72
Fuller Street	W	40	225	200	25	11	300		75	33
Main Street	S	60	900	820	80	9	1230		330	37
&	E	40	250	288	33	13	432		188	75
Lawrence Street	W	40	250	258	8	3	375		125	50
Park Avenue	N	60	875	620	255	29	930		55	6
&	E	40	225	264	39	17	396		171	76
Lawrence Street	W	40	235	205	30	13	307		72	31
Fuller Street	N	60	350	252	98	28	378		28	11
&	S	60	300	170	130	43	255	45		15
Lawrence Street	E	40	250	364	114	46	546		296	118
	W	40	230	205	25	11	307		77	33

highest count during the same period of time was the 700 vehicles headed east on Neill between the Great Northern depot and Main Street.

When the map is studied from the point of view of traffic leaving the central area at peak hour, effects of an off center business district can be seen.

Traffic Leaving Downtown
4:30 p.m. to 5:30 p.m.

North	44.25%
South	3.12%
East	39.76%
West	12.87%
Total	100.00%

In order to estimate future traffic flow problems a study of critical intersections has been made in the central business district. The purpose of this study is to assess the efficiency of these intersections for 1960 traffic flows and for anticipated 1975 traffic volumes. The capacity efficiency or deficiency of an intersection approach is expressed as a percentage and is derived from the following formula:

$$\text{Efficiency or Deficiency} = \frac{\text{Practical Capacity-Volumes}}{\text{Practical Capacity}}$$

An expansion factor of 1.5 was applied in the study to convert 1960 volumes to future 1975 volumes.

The intersection capacity has been calculated by using design capacity charts, and in order to obtain the capacity of the present unsignalized intersections, a percentage of green cycle ratio was assumed in order to allow these intersections to be compared on a relatively equal basis with a signalized intersection. A chart, presenting the highlights of the intersection study is shown on the preceding page.

The intersection capacity chart shows that, of the six intersections studied, four are at or above design capacity in 1960. Five of the six intersections are likely to be operating at or above design capacity by 1975.

Remedial traffic engineering measures may increase the capacity of these intersections, but these measures will in most cases develop problems of their own. Elim-

ination of curb parking will, for example, provide more street capacity, and yet, terminal parking spaces are even now at a premium. Street widening also may increase street capacity, and yet the newer buildings in the area are not at this time being set back from the street to enable future widening.

The recommendation made later in this report to reverse the flow of the existing one-way couplet on Park and Main will help a little in reducing intersection hazard but opening of new downtown arterials appears to be the most rational long-term objective.

Future

It is considered that the future of the central business district will require bold measures. The movement of traditional downtown establishments to the outlying shopping centers has begun and may accelerate. South Main Street is declining and blight is spreading northward along Main Street and Park Avenue. Traffic congestion will be increased by future population, both in volume and in off-balance directional flows of future traffic.

The previously mentioned approaches to downtown rejuvenation: accessibility, visitors attraction, compactness and physical attractiveness, provide the key to the future.

Accessibility

Traffic

Past traffic engineering, within the area, has resulted in the improvement of flows and the relief of congestion. Little improvement can be suggested with the exception of the routing of the existing one-way couplet on Park and Main. The present routing of traffic upon this couplet, Main Street to the south and Park to the north, creates an intersection conflict at the ends of the couplet. This problem will be accentuated when the one-way couplet from the Capitol Interchange is placed in operation in the near future.

It is recommended in the Major Streets Plan that State Street from the south-eastern sector of Helena, be developed as an arterial. The effect of this would be to induce traffic from these rapidly expanding south-eastern residential areas.

Such development of State Street would require widening and probably a clearance program at the south terminus of State with Main Street. Such a routing would give the advantage of linking the expanding residential area to the south of the capitol with the down town section and also with the down town terminus of the Grand Canyon Boulevard Parkway.

A long range possibility exists to further connect the down town area with the community's arterial system. As mentioned previously, Great Northern and Northern Pacific Railroad's track consolidation is very likely.

With removal of the Great Northern down town depot and trackage over the next decade, a good possibility would exist of providing a direct arterial facility from Lyndale Avenue to the heart of down town.

Parking

A program for provision of off-street parking for down town should rely strongly on the Urban Renewal provisions of the Housing Act of 1954 as amended.

The following statement made by the Director of the Housing and Home Finance Agency, presents broadly the Urban Renewal provisions of the Housing Act:

> "An urban renewal project, contemplates that a city acquires by purchase or condemnation all the buildings and land comprising a slum area. It replaces or rehabilitates necessary public utilities, water and sewer lines, streets, sidewalks and similar public improvements. Then it sells or leases the site to a private redevelopment agency under an agreed upon rebuilding plan. The difference between the cost to the city and what it receives for the property represents the net cost. The Federal Government then makes a grant sufficient to pay up to 2/3 of this net cost. The city's 1/3 need not be in cash but may be through donations of land or other real property, demolition and removal work, or the construction or reconstruction of public improvements which benefit the project area".

Areas thought suitable for development as off-street parking lots are to the immediate east and south of the Central Business District.

It is recommended that the City of Helena form a Down Town Parking Authority under the laws of Montana and that this authority retain a firm of proven traffic engineers to carry out a detailed cost study of parking

needs and sites. The urban renewal schemes, suggested later in this section of the report, should also be studied by this firm in order to coordinate future parking plans with the proposed re-development areas.

The proposed zoning ordinance submitted with this report calls for the provision of off-street parking and loading space to be provided for all new structures built within the urban area. While it is thought unlikely that excessive protest will be encountered in the requirements for off-street parking space in the outlying areas, where land is plentiful, provision of space for parking in the congested down town area will probably meet opposition. Therefore, it is suggested that the parking space requirements shown below should be discussed with the retail merchants committee of the Chamber of Commerce for explanation and agreement.

Automobile Parking Space

1. There shall be provided at the time of the erection of any main building or structure, or at the time any main building or structure is enlarged or increased in capacity, minimum off-street parking space with adequate provisions for ingress and egress by standard size automobiles as follows:

a. For Buildings Other Than Dwellings: For a new building or structure or for the enlargement or increase in seating capacity, floor area or guest rooms of any existing main building or structure, there shall be at least one (1) permanently maintained parking space of not less than one hundred forty-four (144) square feet net area as follows:

(1) For hotels, apartment hotels and clubs, at least one (1) parking space for each of the first twenty (20) individual guest rooms or suites; one (1) additional parking space for every four (4) guest rooms or suites in excess of twenty (20), but not exceeding forty (40); and one (1) additional parking space for every six (6) guest rooms or suites in excess of forty (40) guest rooms or suites, provided in said buildings.

(2) For business or commercial buildings or structures having a floor area of 1,500 square feet or more, at least one (1) square foot of parking space for each square foot of floor area on the ground floor, and one (1) square foot of parking space for every two (2) square feet of floor space on the upper floors.

Every hospital, institution, hotel, commercial or industrial building hereafter erected or established on a lot which abuts upon an alley or is surrounded on all sides by streets, shall have one (1) permanently maintained loading space of not less than ten (10) feet in width, twenty (20) feet in length, and twelve (12) feet in height, for each four thousand (4,000) square feet of lot area upon which said building is located; provided however, that not more than two (2) such spaces shall be required on any lot.

Visitor Attraction

South Main--The rejuvenation of the south portion of

Main Street will require detailed planning. Improvement of access to the area by means of State Street and the proposed Parkway should be followed up by a study of the best method of revitalization.

The map on the facing page shows the present use of the land. In general terms, the area between Broadway and the resevoir, and Park and the old fire tower, would be eligible as an Urban Renewal project. This area, however, has many attractive sections and has a large number of historical buildings.

It is recommended, therefore, that the area be redeveloped, possibly with Urban Renewal funds, into a historical center. Acquisition of property and clearance of right-of-way for widening State Street could be eligible for Federal Government renewal funds. Individual homeowners in the project area would also be able to obtain long term, low interest mortgage monies to renovate their own property.

Diagrammatic sketches of one method of redevelopment are shown overleaf.

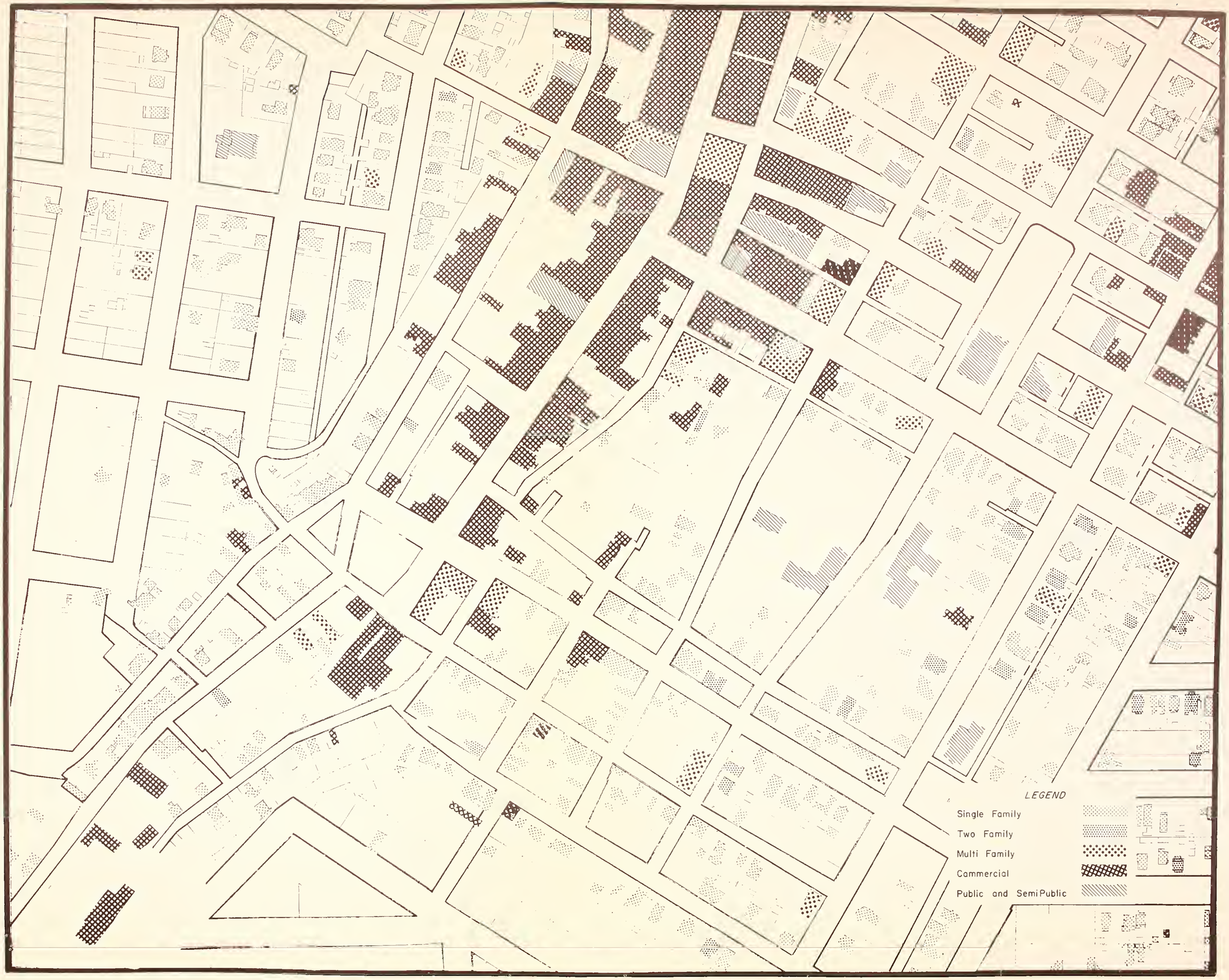
It will be noted that the sketch shows provision of off-street parking lots and space for a large commercial building, just to the south of Wall. This site could possibly be used for a new court house, or a down town shopping center.

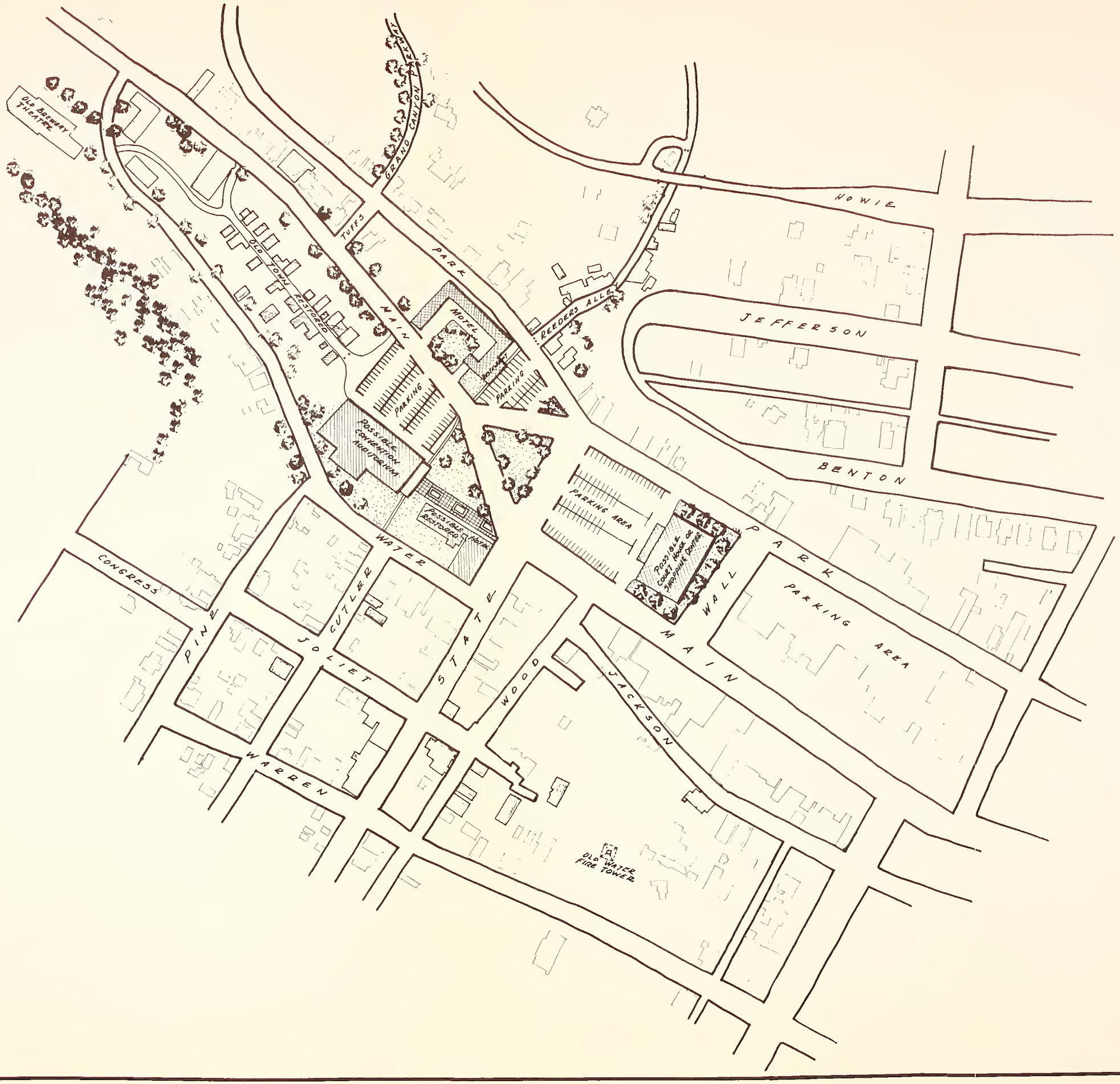
The area from State to the Old Brewery would be the historical center proper. The existing garage could be converted to a convention hall with adequate parking. A down town motel is suggested adjacent to Reeders Alley and the space from the proposed convention hall to the Brewery is proposed to be developed as a restored town of the mid 19th century.

Access to the area from all directions would be good, with the proposed parkway entering at the approximate center of the historical area.

Another possibility for this area has been developed by individual citizens of Helena. This calls for the conversion of Reeders Alley into a downtown attraction.

The proposal contemplates the acquisition of the land and improvements comprising the alley and development of a small artists colony.


LEGEND
Single Family
Two Family
Multi Family
Commercial
Public and SemiPublic


OLD BROWARY THEATRE
OLD TOWN RESTORED
TUFFS
GRAND CANYON
PARK
REEDERS ALLEY
HOWIE
JEFFERSON
BENTON
MOTEL
PARKING
MAIN
POSSIBLE CONVENTION AUDITORIUM
POSSIBLE RESTORED
WATER
CONGRESS
PINE
CUTLER
JOLIET
STATE
WOOD
WARREN
JACKSON
PARKING AREA
POSSIBLE COURT HOUSE OR SHOPPING CENTER
WALL
PARK
PARKING AREA
OLD WATER FIRE TOWER

GRAND CANYON PARKWAY

IT HAS BEEN PROPOSED THAT THE GRAND CANYON PARKWAY BE EXTENDED FROM ITS PRESENT ENDING AT HOLTER BEHIND THE RESERVOIR TO EXIT IN THE HISTORICAL AREA.

REEDERS ALLEY ART COLONY

IT IS PROPOSED THAT THE PRESENT REEDERS ALLEY BE CHANGED INTO A SMALL ART COLONY. THE PRESENT BUILDINGS TO BE RENOVATED FOR USE AS GIFT SHOP, ART STUDIOS, CRAFTS, MUSIC STUDIO, DANCING, ETC. THE ALLEY WOULD BE OPEN TO FOOT TRAFFIC ONLY.

PROPOSED COURT HOUSE OR SHOPPING CENTER

THE AREA BETWEEN WALL & STATE, PARK & MAIN STREETS, COULD BE MADE INTO A NEW COUNTY COURT HOUSE OR SHOPPING CENTER. THERE WOULD BE AMPLE LAND FOR EITHER, AND WOULD TEND TO BRING MORE TRAFFIC TO THE SOUTH END OF THE CITY AND AID BUSINESS.

OLD TOWN

A RESTORED WESTERN TOWN. BUILDINGS THAT HAVE HISTORICAL SIGNIFICANCE COULD BE MOVED INTO THIS AREA AND RESTORED.

MOTEL - RESTAURANT

TO ADD TO THE COVENIENCE OF THE TOURIST, A MODERN MOTEL-RESTAURANT COULD BE LOCATED IN THIS VICINITY.

POSSIBLE CONVENTION AUDITORIUM

WITH A MINIMUM OF ALTERATION, THIS BUILDING COULD BE CHANGED INTO A CONVENTION HALL. IT WOULD HAVE AMPLE PARKING SPACE & BE CLOSE TO THE CITY CENTER.

GIFT SHOP
CRAFT ART
ART STUDIO
REEDERS ALLEY
ART CENTER
TOURIST
INFORMATION

The present building would remain but be renovated to provide studio space for followers of many fields of art, including painters, sculptors, ceramicists, dance instructors and musicians. Individual artists would be able to rent or buy, at a relatively low cost, whichever of the studios that would meet his needs.

One of the existing buildings nearest the Park Street entrance to the Alley could be converted into a gift shop, primarily selling the wares of the Alley's tenants.

It is suggested that the small but attractive park directly behind the existing Pioneer cabin could be developed into an open-air art gallery, with picnic tables and walkways.

Both ends of the settlement would be closed to automobile traffic. This would call for a re-routing of Benton into Jefferson at the top of the draw. This proposal could lead to establishment of a down town attraction, providing years of pulling power for a small initial investment. Urban Renewal funds could be used in a project of this type and the proposal dovetails into the suggestion of creating a historical center at this end of the Central Business District.

Sketches of one method for development of the area are shown overleaf.

Compactness

The proposed zoning ordinance contains a district entitled "Commercial-Central". This area is considered the core of downtown Helena and every effort should be made to concentrate the following uses within it:

large stores	restaurants
specialized shops	recreation facilities
public transport centers	financial institutions
cultural centers	governmental centers
business offices	business services
hotels	theaters
lawyers and doctors	apartments

The long range objective for this area should be to induce relocation of incompatible uses to the outlying commercial districts. These marginal uses in most cases would find it to their own advantage to relocate and more important, it would open up land for more logical downtown uses. The important businesses could expand. Slums could be cleared out. Apartments could be built just outside the core area and parks and plazas created throughout the entire section.

MAJOR STREETS

In any community, the streets system is an integral part of the physical lay-out from the very beginning. If a community had only five homes, one store, and a railroad station, flows of traffic would naturally develop among them, and help set a pattern for future streets construction.

The pattern followed by Helena's streets was established many years ago; in some older sections of town the streets were not even designed with the "horseless carriage" in mind. Rather, they carried vehicles varying from horse-drawn ore wagons to the elaborate private coaches of the rich.

To provide easy traffic circulation today, however, among Helena's residential, commercial and industrial area, an efficient network of arterial streets will be necessary. In previous sections of this Master Plan the planning consultant has outlined the land use patterns that will be most desirable and practical for Helena's ultimate development. Such patterns help to establish the directions and volumes of the city's traffic flows: for example, a large residential neighborhood will generate a great deal of traffic toward the Central Business District or other work areas every morning, and will be the destination of the same traffic each evening. In turn, the street pattern may help define future land use: a major arterial may, for example, encourage commercial development or conversely discourage the building of new homes along its borders.

Helena's streets system, then, must be planned to conform with the planned ultimate land use pattern as well as to help promote easy traffic circulation within the city. The pattern that has evolved in the past, of course, must serve as a basis for the future, and there are limited changes that can be made in the existing systems. But by using traffic control devices and by adjusting the original streets design where necessary, traffic flows may be handled more efficiently and redistributed to comply with present traffic desire lines and volumes. For future subdivisions, the streets may be designed from the beginning to manage traffic safely and easily. In short, the streets plan must accommodate present and projected traffic flows and serve existing and ultimate land use patterns.

Unsuitable for Residential Development

Predominately Occupied Residential

Vacant Residential Platted

Vacant Residential Unplatted

1 MILE RADIUS

2 MILE RADIUS

3 MILE RADIUS

Ronald Thompson and Associates
Silver Bow Block — Butte, Montana

LAND STATUS
URBAN AREA – 1959
(Diagramatic only)

DRAWN GT	CHECKED RT	DRAWING NO.	
TRACED GT	REVISIONS		
SCALE 1000 0 1000 2000 3000			

City, Regional and Economic Planning and Research

Though it does conform to general planning standards for an efficient streets network, the streets plan presented on the following pages, aims particularly at handling Helena's individual traffic needs.

This plan does not represent a detailed traffic engineering study but is only a guide for future streets development. It is not expected that the existing system will be suddenly transformed to the ideal presented in this plan, but will be carried out in gradual, distinct stages.

Existing Conditions

The growth of the Helena urban area has been complicated by a series of man-made and natural barriers, ranging from the hills and mountains to the south to the railroad rights-of-way that cut the area.

The bulk of recent residential development has been mainly confined to the filling in of areas to the west along Euclid Avenue and to the east of the State Capitol grounds. Some sparse suburban development has also occurred to the north of the city limits in the Helena Valley.

The proposed location of the Inter-State Highway to the east of the existing built-up area will act as a barrier to urban growth to the east and also cause some separation of the cities of Helena and East Helena.

Present interchange plans, for the Inter-State Highway, do provide for good access between the two cities and in all probability will cause a concentration of industrial-commercial land use in the vicinity of the interchange points.

Future residential growth, in the main, is expected to fill in the existing vacant subdivided areas and to continue in a northerly direction into the Helena Valley.

As is shown on the facing map, within a one mile radius of Helena's Central Business District there is available 50 acres of land, suitable for residential development; within a two mile radius, approximately 330 acres, of which about half is platted; and within a three mile radius of Helena's Central Business District there are over 1,500 acres of land suitable for residential development, of which only approximately 10% is platted.

It is anticipated, based on projected population trends, that the future urban growth problems of Helena will be greatest within the three mile circle and that growth outside this radius will be primarily of a sub-urban nature.

Criteria used in this analysis to determine the suitability of land for residential purpose has included the study of past patterns of residential growth; availability of land free from industrial blight; municipal improvements, school systems, travel times and other measures of residential desirability. The actual market availability of the land has not been considered.

General conclusions to be reached from a study of the existing land use, traffic flows and growth trends exhibited in the Helena urban area, indicate an evolving "fan type" of development caused primarily by the topography to the south of the existing urban area. This type of growth pattern will be accentuated by the proposed location of the Inter State Highway.

To elaborate the "fan-shaped" growth theory, the following statement from the National Market Letter of Real Estate Research Corporation, Vol. I, No. 4, of August, 1946, is of value:

> "Our studies have shown us that there are three primary types of cities--the fan-shaped city, the rectangular city, and the square city--as illustrated in the chart below. The decline of the downtown dominance of cities varies with their shape. Decentralization is generally farthest advanced in fan-shaped cities and least developed in square cities. The reason for this fact is obvious from a study of the cities shown in the chart. In the fan-shaped city the market moves farthest from the core; it is easier for trading centers to "get between" the buyers and the market place. In a society which wants to save time and effort a buyer will not go "downtown" to get goods when he can get the same goods at the same price with less effort and travel".

The gradual movement of new commercial enterprises to the north along Last Chance Gulch is a small indication of the effects of fan growth exerting commercial pull to the north.

Other decentralization effects of the fan-shaped city will not be too immediately obvious in Helena, particularly when the relatively small increase in the expected population is compared with the available residential land. Care should be taken, however, to ensure good access to the downtown business core, in order to offset some of the undesirable decentralization that tends to follow fan growth.

Motor-Vehicle Ownership

Based on the 1957 motor-vehicle registration of 14,319 cars, busses and trucks in Lewis and Clark County a vehicle ownership ratio of 2.0 persons per registered vehicle was attained compared with 2.1 and 2.5 persons per registered vehicle for Missoula County and Silver Bow County respectively.

In June, 1960, a random sample telephone survey indicated that the location of population in the Helena area, made a large difference in private automobile ownership. The results of this 10% random sample survey are tabulated below.

Automobile Ownership--1960

Area	Persons per Passenger Car	
City of Helena		
Golf Course		3.2
Carroll College		3.1
Airport		3.7
High School		3.9
Capitol		3.0
South Helena		4.9
Southwest Helena		2.5
Fringe Area		2.0
East Helena		2.7
Actual County ratio in 1960 based on Registrar of Motor Vehicles data:	$\frac{10,945}{27,746}$ cars persons	2.53

The table above indicates effects of sparseness of population in the fringe areas of the city, where low

population density and distance from work and service areas causes a higher percentage of car ownership than in the more densely built-up sections of the city.

Traffic Flows

In the development of this major streets plan some 250 traffic counts were made in 1959 by the planning staff. These counts, together with additional traffic counts taken at key points by the State Highway Department in 1956, are shown on the following traffic flow map on an Average Daily Travel Basis.

Average daily travel, or A.D.T., represents the total traffic for the year divided by 365. A.D.T. data for the Helena area have been obtained by applying expansion factors to peak hour traffic counts.

Located as it is, at the junction of U.S. Highways 10 and 91, Helena traffic flows are complicated by factors of through traffic.

The external origin-destination survey, made in 1956 by the Montana Highway Commission in cooperation with the Bureau of Public Roads, has proved invaluable in studying the existing traffic desire lines in the area.

Below are listed the tabulations of traffic desire lines for each of the four external origin-destination stations established in the 1956 survey.

DISTRIBUTION OF ALL TRAFFIC PASSING
STATION 1 - US 91 - JULY, 1956

Average Weekday Traffic- - - - - - - - - - -	-3752
Percent to Central Business District - - -	-14.5
Percent Through Traffic (North-East) - - -	-12.5
Percent Through Traffic (North-South)- - - -	8.2
Percent Through Traffic (North-West) - - -	-12.8

DISTRIBUTION OF ALL TRAFFIC PASSING
STATION 2 - US 10 North - JULY, 1956

Average Weekday Traffic- - - - - - - - - - -	-4646
Percent to Central Business District - - -	-16.6
Percent Through Traffic (East-North) - - -	-10.1
Percent Through Traffic (East-West)- - - -	-17.6

TRAFFIC SCALE:

7,500 Cars
15,000 Cars
22,500 Cars
30,000 Cars

Ronold Thompson and Associates
Silver Bow Block —— Butte, Montana

A.D.T. TRAFFIC FLOWS
URBAN AREA — 1959

DRAWN GT	CHECKED RT	DRAWING NO.
TRACED GT	REVISIONS	
SCALE 1800 0 1800 3600 5400		

City, Regional and Economic Planning and Research

DISTRIBUTION OF ALL TRAFFIC PASSING

STATION 3 - US 91 SOUTH - JULY, 1956

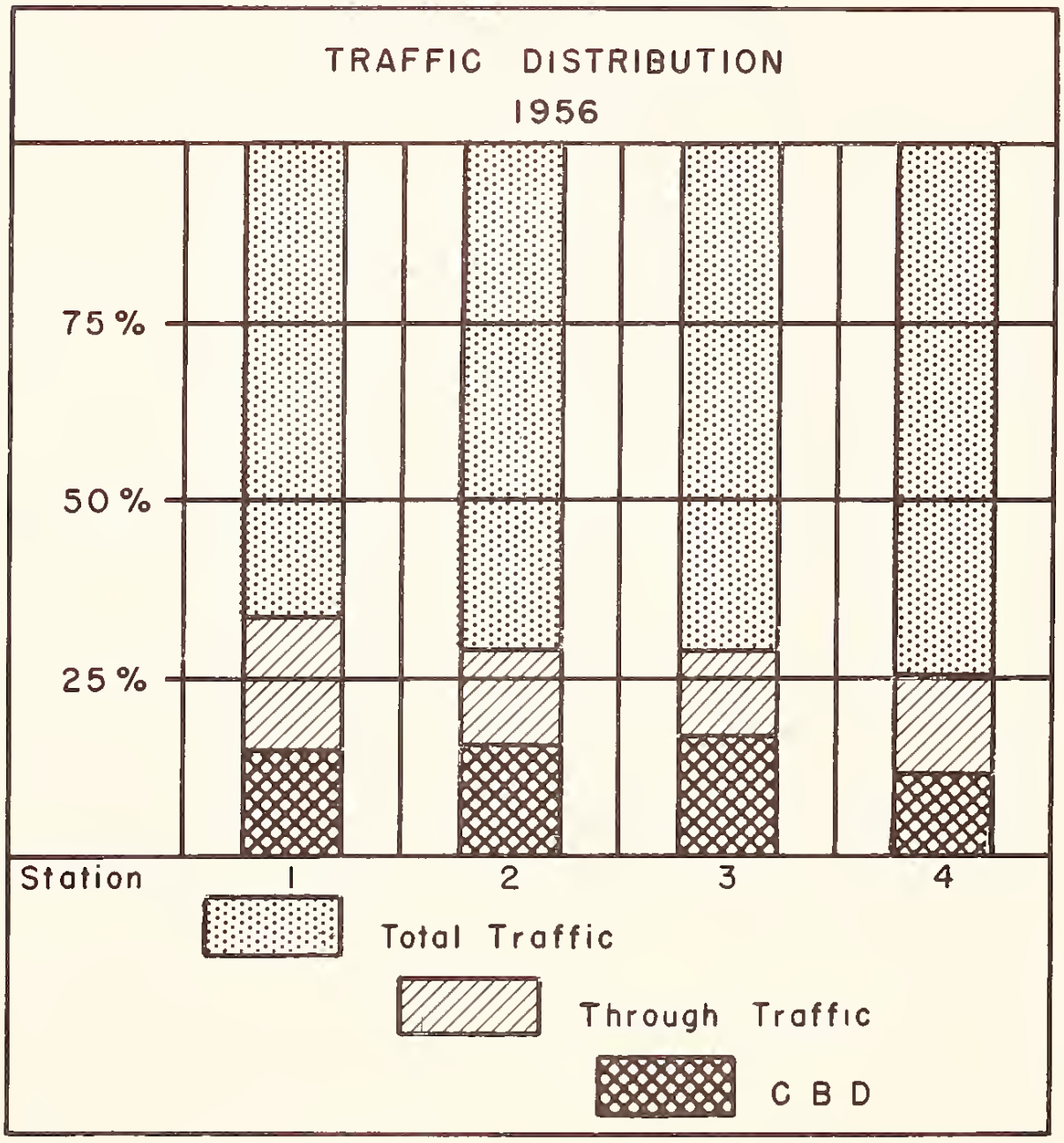
Average Weekday Traffic	1479
Percent to Central Business District	18.4
Percent Through Traffic (South-North)	20.7
Percent Through Traffic (South-West)	7.6

DISTRIBUTION OF ALL TRAFFIC PASSING

STATION 4 - US 10 NORTH - JULY, 1956

Average Weekday Traffic	5359
Percent to Central Business District	13.3
Percent Through Traffic (West-North)	9.0
Percent Through Traffic (West-East)	15.3
Percent Through Traffic (West-South)	2.1

Two main travel desire lines can be noted from the above tabulations, the first is the high percentage of through traffic with no origin or destination within the Helena urban area. This is detailed below in bar chart form:



The second point to be noted is the high percentage of external travel desire to or from the Central Business District, as also shown on the chart on the preceding page.

To the above mentioned main desire points shown can be added yet another. This zone of traffic desire is the State Capitol where a high percentage of the external cordon flows are designated as either an origin or destination in the 1956 survey.

To be considered in developing an arterials plan is the degree of relief to be expected by the institution of by-pass routes. In the case of Helena, based upon the 1956 origin-destination survey, at least 35% of the total through traffic flow may be expected to utilize the Inter State Highway. The majority of this will, of course, be constituted of north and south bound through traffic, together with a certain amount of local cross-town commuter traffic.

The Inter State Highway, however, does not provide a ready access for the flows from and to U.S. Highway 10N nor to the Central Business District, or to the State Capitol grounds. These exhibited desire lines must be accommodated in any local street planning for the area.

Standards and Requirements

Whether naturally or by design, most cities have in operation three types of streets: arterial, collector, and minor.

Arterial Streets

Although few in number, the arterials carry the greatest bulk of traffic and are the basis of the street plan; they are designed to induce easy and safe distribution of traffic throughout the area.

As the arterial streets are developed and improved, a greater volume of traffic will travel on them, and traffic will be drawn away from residential areas, where maximum safety and quiet are desirable.

Collector Streets

This type of street carries urban traffic within neighborhoods and also collects and leads traffic to the arterial streets system.

Minor Streets

Minor streets are intended to handle local traffic within a residential neighborhood and usually are designed to discourage through flows. The layout of this form of street is usually left to the discretion of the subdivider and only minimum regulation required.

The following page indicates proposed design standards for the major and minor streets within the planning area.

It will be noted that the design standards contained overleaf call for a minimum eighty feet right-of way for new arterials with a suggestion that a ninety six foot right-of-way would be more desirable.

The reasons for these standards are: that although a four-lane arterial may be developed within the confines of a sixty foot right-of-way, there remains little room for the installation of necessary street furniture, such as fire hydrants, power poles and the like. Four lane construction within the sixty foot right-of-way would also eliminate boulevard space.

The proposed design standards recommends, therefore, a minimum right-of-way of eighty feet for all new arterials and a separate ordinance requiring an additional set-back regulation on all arterial streets within the area. The proposed minimum additional set-back regulation if 40 feet from the center line of the designated arterial, and the maximum additional set-back regulation is 48 feet from the center line. Each of these set-backs would be over and above the required zoning set-back for the district in which the development occurred.

The effect of these suggested street widening regulations would be to prevent construction upon the land immediately abutting an arterial street, thus enabling eventual condemnation of a land strip for road widening purposes. There are possible legal problems in such a procedure, particularly the protest of "condemnation without compensation". The intent of the procedure is clear, although the method of carrying out may need refinement.

PROPOSED STREET DESIGN STANDARDS

Helena-East Helena Lewis and Clark City-County Planning Board

		Right-of-way	Paving	Curb and Sidewalk	Boulevard	Building Setback
Arterial Streets: Major streets designed to carry a high volume. Will act as the basic framework of the Thoroughfare Plan. These design standards are intended to provide for four moving lanes of traffic - two in each direction and one parallel parking lane on each side.	Existing:	60'	48'	6' (2)	--	40' from C.L. and zoning regulations
	Proposed:	80'	56'	6' (2)	6' (2)	zoning regulations
	Desirable:	96'	56'	6' (2)	6' (2) Median 16'	zoning regulations
Collector Streets: Intended as principle trafficways within and between neighborhoods. They also provide the main means of access to arterial street system and to abutting residential property. These design standards are intended to provide for two moving lanes of traffic - one in each direction and one parallel parking lane on each side.		60'	40'	5' (2)	5' (2)	zoning regulations
Minor Streets: Intended to provide access to private property within neighborhoods. These streets are of limited continuity, and are not intended to carry heavy volumes of traffic. These design standards are intended to provide two lanes for relatively slow moving traffic and one parallel parking lane on each side.		60'	36'	5' (2)	6' (2)	zoning regulations

Arterial
Arteriol (Proposed)
Collector
Collector (Proposed)
Porkwoy
Interstote
Rural Rood

Eastside
US 91
Benton
Fairgrounds
North
Tailings
Road
North
Custer
Avenue
Williams
Hollins
Joslyn
Euclid
Fairgrounds
Benton
Aspen
Cedor
California
Phoenix
Phoenix
IO-N
Grand
Conyon
Henderson
Parkway
Lyndale
Montana
Boulder
Airport Road
Front
Neill
Main
Helena
Park
Prospect
Lamborn
IO-N
Avenue
11th Ave
Broodway
Stote
Wynne
Montana
SUBJECT TO URBAN RENEWAL

Ultimate requirements for the area's street system should be:

1. A loop system of cross-town routes to guide through traffic around the central business district. New streets may be opened, existing radial arteries connected with the loop, or present two-way streets converted in into one-way couplets.
2. Traffic loops bounding individual areas. Off-set intersections should be eliminated, and key streets widened.
3. An adequate number of streets leading from and to the central business district and other work areas. New streets may be constructed, present ones widened or long one-way couplets established.

It should be possible to execute the streets plan in gradual, distinct stages. In the plan presented in the following pages some projects are exceptionally long range. These long range projects should be studied now, and whenever possible, needed right-of-way for long range projects should be acquired and reserved for ultimate construction.

Reservation of this right-of-way may be attained in several ways, ranging from use of the subdivision control powers of the local authorities to complex urban renewal or slum clearance schemes.

STREETS PLAN

The proposed streets plan shown on the facing map is designed to accommodate the future traffic flows of the urban area.

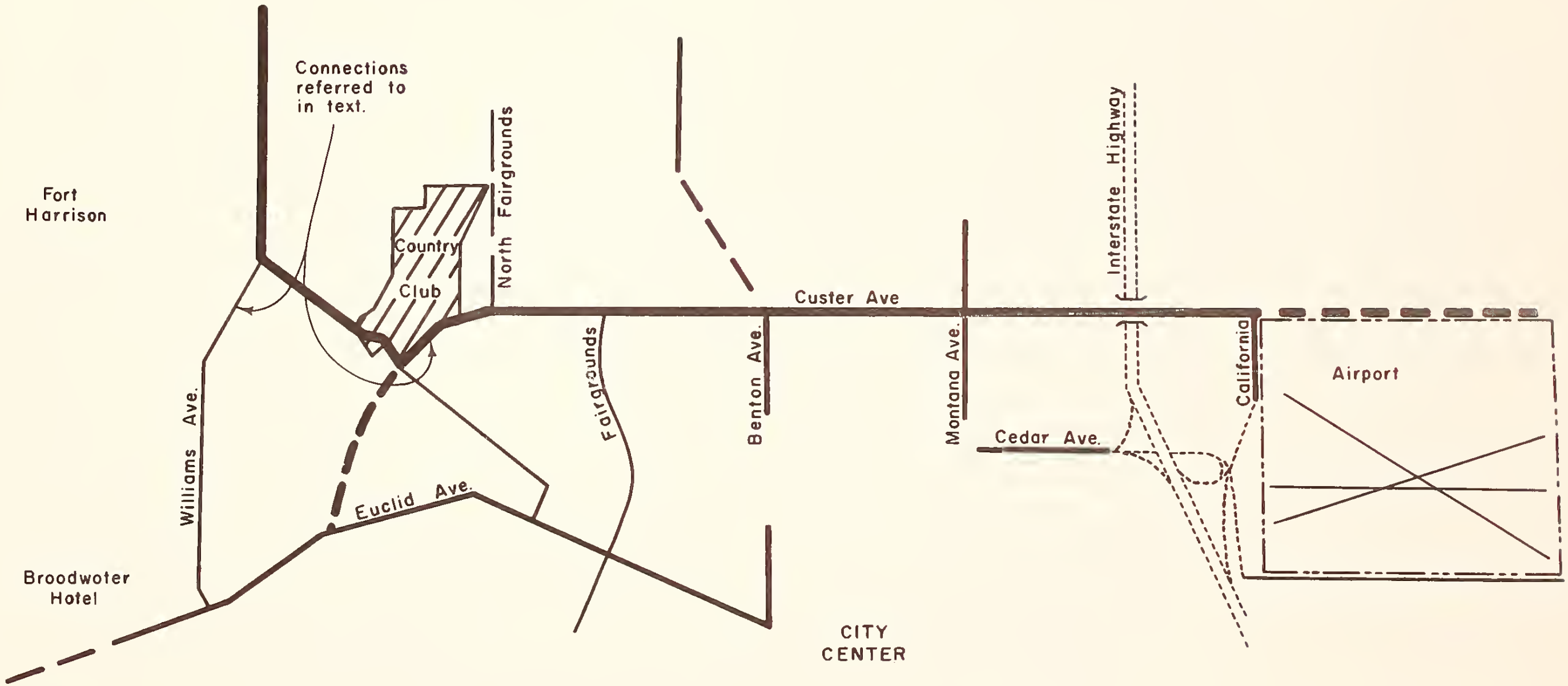
Arterials are the basic framework of any streets plan and are designed to carry the bulk of the area's traffic.

Arterials

a. Montana Avenue:- This north-south arterial extends north from Broadway connecting with the existing Highway 91 at the intersection of Cole Avenue.

Presently serving as an arterial, this street is carrying in 1960 a traffic volume of 8,000 vehicles per day on an average daily travel basis.

The stretch of Montana between the intersections of Lyndale and Cedar is of inadequate width at this time, and widening will be necessary. Some treatment of the


Fort
Harrison
Connections
referred to
in text.
Country
Club
North Fairgrounds
Custer Ave
Interstate Highway
Williams Ave.
Fairgrounds
Benton Ave.
Montana Ave.
California
Airport
Cedar Ave.
Euclid Ave.
Broodwoter
Hotel
CITY
CENTER

Lyndale intersection will be necessary to eliminate traffic hazards and a suggested intersection design has been submitted to the Board.

b. California:- This arterial will serve as an approach road to and from the proposed Cedar Street Interchange, and will connect this interchange with Custer, a very important east-west arterial.

c. North Benton Extension:- It will be noted from the Streets Plan that a realignment of this right-of-way is proposed. This realignment would connect Benton proper with the proposed northerly extension and would result in the arterial running on the eastern side of the Woodlawn Park Subdivision prior to entering Custer. As the required right-of-way for such a realignment is open now, the land for the relocation should be reserved immediately, prior to any development that might hinder the road connection.

d. Custer:- It is proposed in the Streets Plan that Custer will serve as the major arterial bounding the built-up urban area. Custer extends into the area north of East Helena; overpasses and connects with the Inter State Highway and may be extended to the west just south of the Highway Shops. From the Highway Shops the road will cross the tracks at the juncture of the Northern Pacific and Great Northern railroads and continue along the Country Club boundary to its southeasterly border at Hollins Avenue.

At the Country Club the road will connect with the existing county road, and with realignment will eventually connect with Highway 10W.

This connection will require some survey and construction work, but is very desirable. This arterial will in all probability serve as a by-pass route and should prove of particular value to through truck traffic from the east and west. The proposed alignment of this arterial is shown on the preceding page.

e. Benton:- This street, from its intersection with Park, is presently serving as an arterial and should remain so in future planning.

f. Park:- This street is acting as an arterial at this time, with high volumes of traffic being experienced. Between its intersection with State and Neill the

street has been converted to a north-bound, one-way street. This street will be treated in more detail in the Central Business District section of this report.

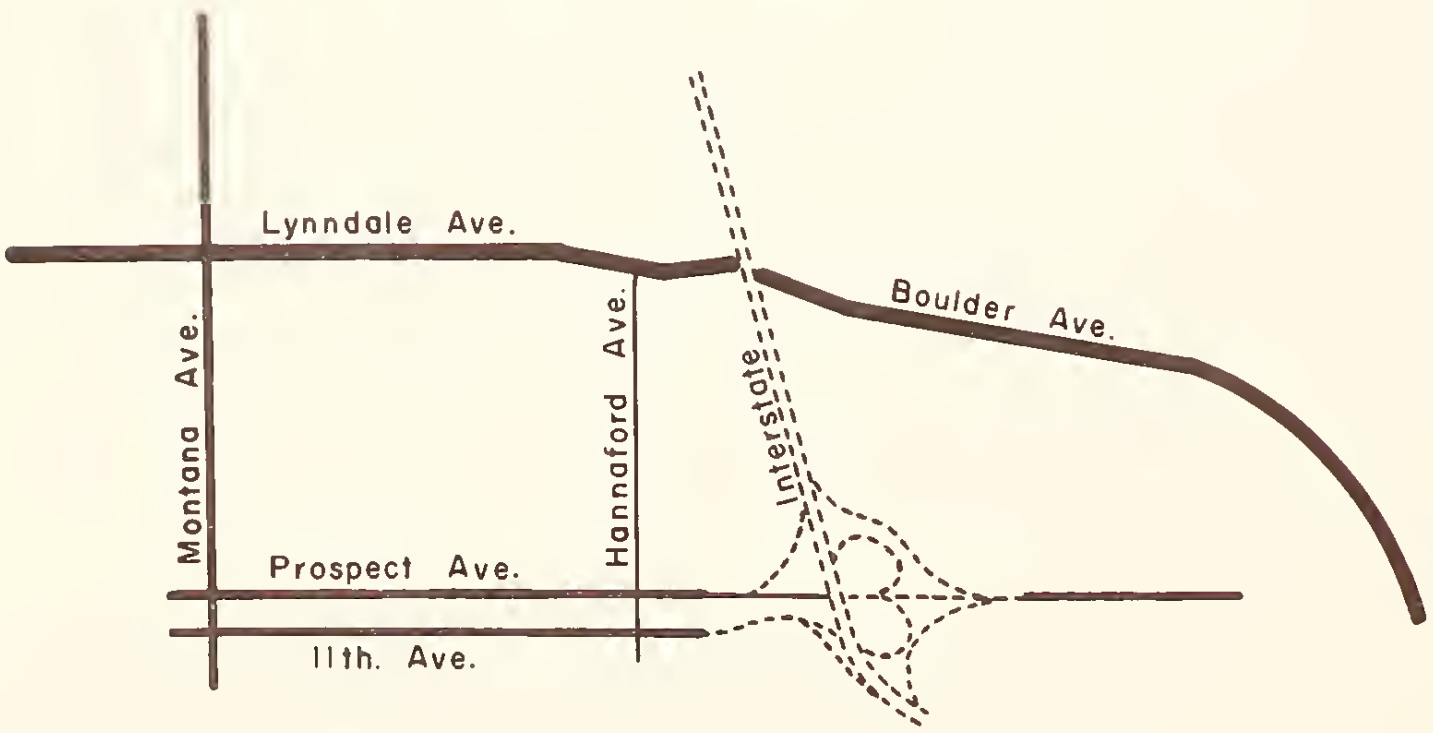
g. Main:- Extending from Lyndale to State, this street is presently serving as an arterial. The southern portion of the street, from State to Neill, has been converted to a south bound one-way street coupled with Park.

h. Lyndale:- Running from Benton east to Montana Avenue, Lyndale is serving as an arterial at this time.

The recently announced plan of consolidation between the Great Northern and the Northern Pacific railroads, if carried out, will lead to a great deal of route facility rationalization. This point of view has been stressed by spokesmen for the two companies as a method of streamlining operations.

It would appear logical that a consolidation of Great Northern and Northern Pacific trackage, freight facilities and passenger depots in Helena not only would allow a more efficient and economic operation but could conceivably allow the removal of the existing Great Northern depot and tracks from downtown Helena. This would make available over 26 acres of land in downtown Helena for more lucrative commercial use.

It is also recommended in the plan that Lyndale connect with Boulder in the vicinity of the newly constructed Inter State Highway overpass. This realignment will permit flow of traffic under the overpass to and from the potential industrial area on the east side of

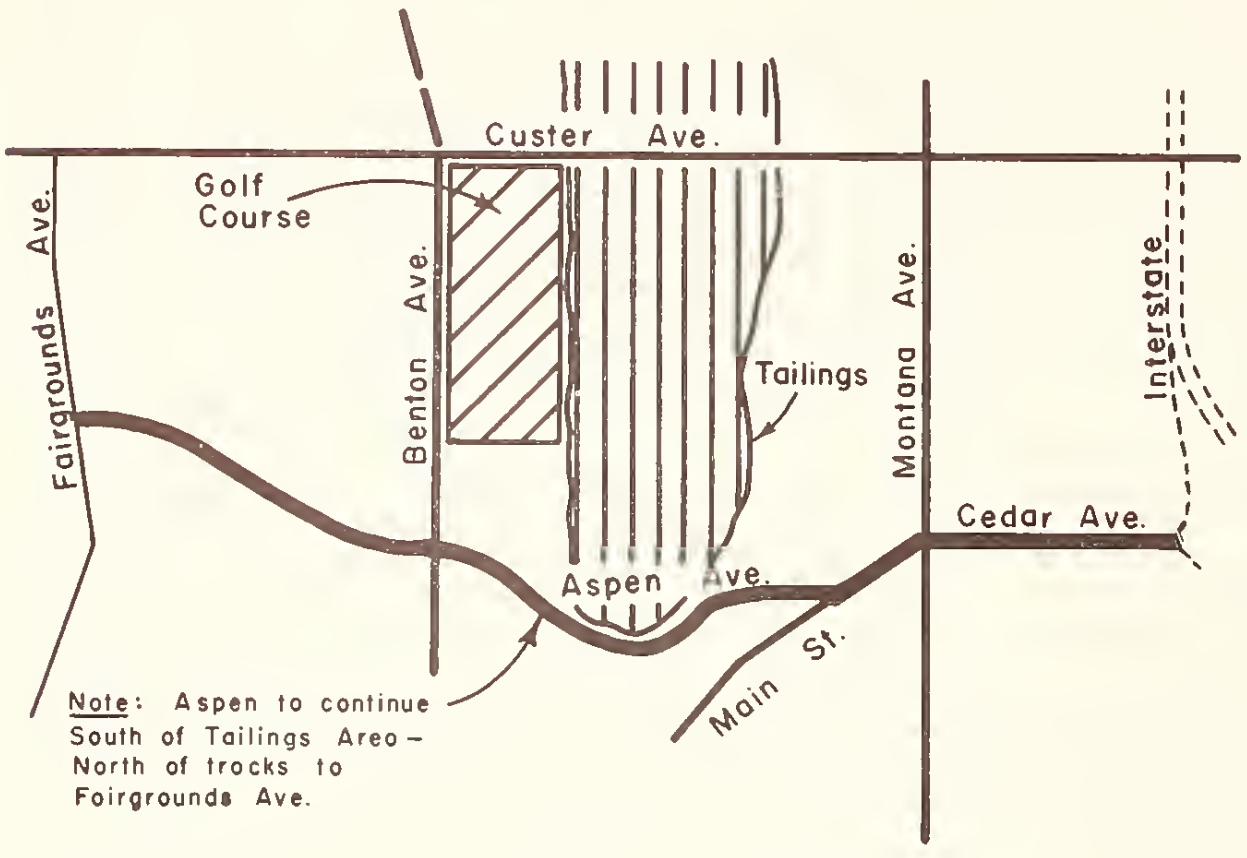


the Inter State. This Lyndale Boulder extension should be continued east to connect eventually with U.S. 12 to East Helena.

i. Neill:- This street is presently carrying a high volume of traffic and is treated in more detail in the Central Business District section of this report.

j. Cedar and Aspen:- This street will serve as the main northern access from the Inter State Highway to downtown Helena. Widening will be required and in all probability this street will attract land development in the Highway Service classification.

It is recommended in the Plan that Cedar be projected through to the west. Most suited for this extension is Aspen. It is possible to extend this street through the south of the tailings area, along the northern side of the railroad right-of-way, with arterial connections at Benton and Fairgrounds Avenue.



k. Prospect and 11th Avenue:- The design of the Capitol Interchange envisions these two streets as a one-way couplet from the Inter State Highway to Montana Avenue. This couplet will function with Prospect as the west-bound and 11th as the east-bound leg. In order to control turning movements at Montana Avenue and Prospect a signal system will probably be required.

On a long range basis it appears feasible, at not too high a cost, to extend Prospect through to Front

Street, thus creating a long one-way couplet to downtown Helena. Such an extension will call for realignment of the right-of-way at Harlow, and cutting through two blocks of residential property to eventually link up with 13th Avenue.

Other arterials shown on the plan are either long range proposals or are serving as major streets at this time. The main effect of designation as arterials will be to impose the additional set-back regulations mentioned previously in this report.

Collector Streets

Collectors are second only to the arterials in the street plan framework, and are designed to carry the bulk of the neighborhood traffic to the nearest arterial.

There are two north-south collectors within the city limits. These are Henderson-Fairgrounds and Fee Avenue.

a. Henderson-Fairgrounds Avenues:- This north-south collector will eventually connect Grand Canyon Parkway to the south with Custer Avenue to the north at the present entrance to the Fairgrounds. The road is in existence presently except for the distance of two or three blocks from the Parkway. No trouble should be encountered extending Henderson to the Parkway.

At present it is not expected that there will be need of more collectors in the area west of Benton.

b. Lambourn Avenue:- Running from Broadway in the south to the Lyndale-Boulder arterial in the north, this collector may become an important link with the Inter State Interchange.

1. Traffic wishing to bypass the downtown area may find it preferable to travel the Lyndale-Lambourn route, either to or from the Interchange.

2. Those going to or coming from the Capitol area may be served by the Broadway-Lambourn route as it leads to the Inter State Interchange. This area is growing rapidly, thereby increasing the potential of Broadway and Lambourn as collector streets.

c. Montana Avenue:- This is a continuation of the Montana Avenue arterial. It begins at Broadway and continues south to the end of the street. Some effort should be made to purchase the triangular parcel of land

owned by the Co-Op Publishing Company, to realign the intersection of Montana and Broadway.

d. Airport Collector:- Running north-south between Phoenix at the southeastern corner of the airport and the extension of Broadway, this route will serve the proposed industrial area south of the airport.

e. North Fairgrounds Avenue:- North Fairgrounds Avenue is shown on the proposed streets plan immediately west of the Fairgrounds. As population growth extends in this direction, there will be a definite necessity for a north-south collector street between Williams Avenue and North Benton Extension. It may be sometime before the Northwest area has intensive housing growth; however, plans should be made, well in advance, of that possibility, to create streets that will care for the traffic in that area.

f. Eastside Collector:- There should be some provisions made to care for traffic between the Inter State Highway and the Prickly Pear Creek road. Although this area is now primarily farm land, it is conceivable that despite the natural barrier that will be created by the Inter State Highway, homes will be erected here. A collector street running north-south as shown on the streets plan map should be considered, should sub-division plans be made.

There are a number of east-west collector streets within the city limits. These are discussed in detail below.

g. Helena Avenue:- Presently Helena Avenue is a major street between the Neill-Main intersection northeast to the Montana-Lyndale intersection. There are bad intersections at both Main and Montana streets. The poor condition could be alleviated considerably at the eastern end by closing Helena Avenue between Boulder and Lyndale Avenues. This resulting realignment would take traffic from Helena over Boulder to Montana. This would result in a right angle corner at Montana and Boulder.

Proper phasing of traffic lights at the Montana-Lyndale and Montana-Boulder intersections should result in a very harmonious flow of traffic in this area.

h. Phoenix Avenue:- This is a neighborhood coll-

ector running east-west between Montana Avenue and the Inter State, dead-ending at its easternmost part.

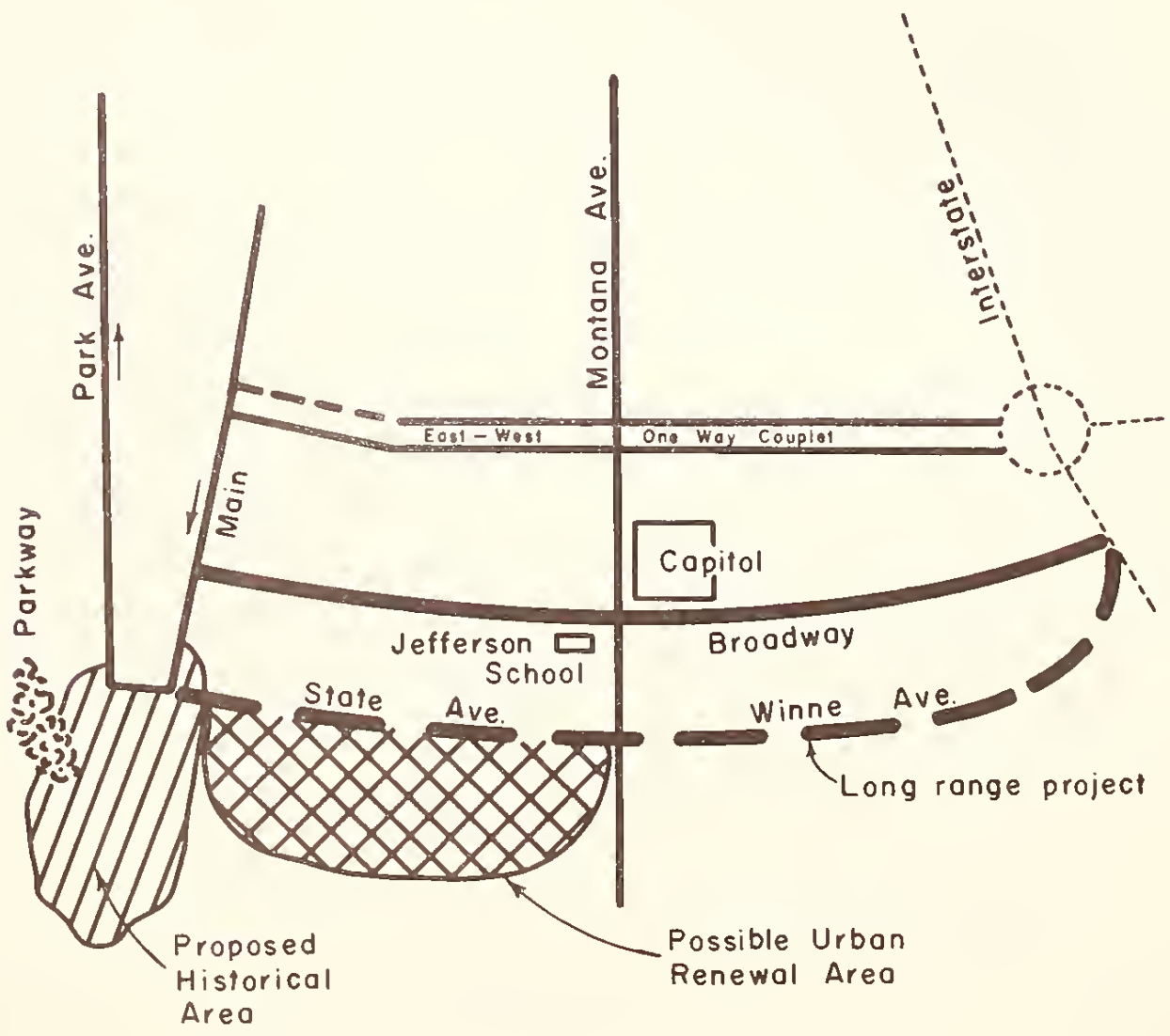
i. Broadway:- Broadway is the southernmost east-west collector, running east from Main Street to the north-south Airport collector road. It is suggested that Broadway be considered as a "temporary" arterial while further study is being made for a more satisfactory arterial route across this portion of the city. This facility could be improved considerably by either the purchase of the buildings at the corner of Broadway and Main and then connecting Broadway at an angle to Edwards, or by the purchase of the buildings at the foot of Broadway and thus permitting the extension of Broadway to connect with Park Avenue.

Some of the problems that may be encountered on this street are as follows:

1. Broadway is narrow and tree-lined. The street would require widening, necessitating the removal of at least one row of trees, to accommodate increased traffic flow.

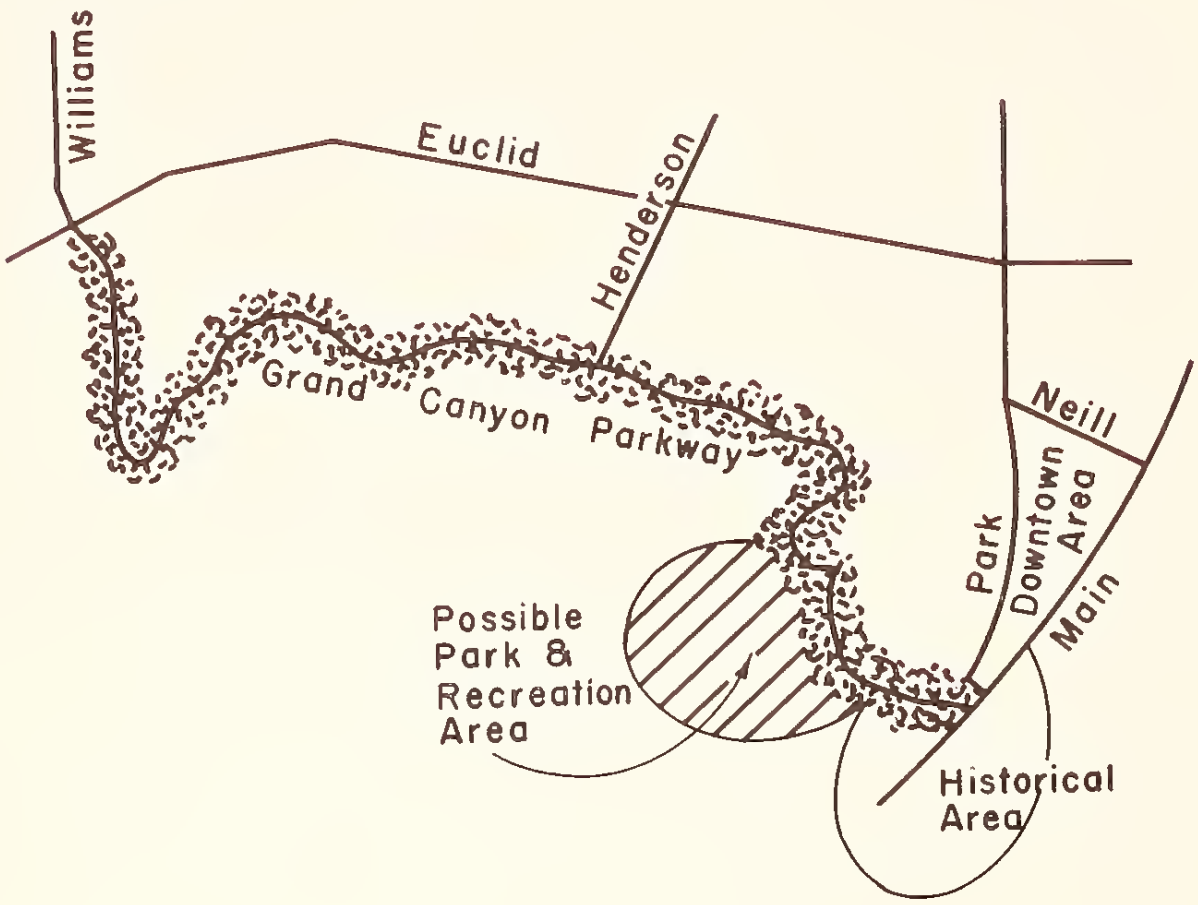
2. This route passes directly by the Jefferson School.

3. Broadway passes directly by the Capitol area and unless there is parking on one side of the street only and realignment at Montana, there could be considerable traffic congestion.



These problems could be solved should a more southerly route be found or created. Such a route could be developed as an arterial and possibly located on State and Winne Avenues. An extensive clearance and renewal project would be necessary, but the end result would justify it. This project is exceptionally long range.

j. North Tailings Road:- To care for the possible expansion of housing growth to the northwest, plans should be made to have a collector street run east from Williams Avenue just north of the Country Club to Highway 91. This route should be planned along the most feasible route through the Seven Mile and the Ten Mile Creek areas.



k. Parkway:- Grand Canyon Parkway presently runs from US 10N at Perry Lane eastward along the side of Mt. Helena to Holter Avenue. From Holter the Parkway could continue to the rear of the reservoir and terminate at the proposed Historical area below State.

This Parkway could be made into the most scenic and picturesque drive in the area. It would also have the advantage of leading traffic from the west into the proposed Historical Area at the south of the city proper.

All of the area above the Parkway should be kept free of residential growth, while below the Parkway a strip of land, approximating a city block in depth, should also be kept open. Turn-out parking strips could be provided along the lower side.

The Drive has much natural beauty that should be retained. There is one small bridge near the western end that should be large enough to accommodate future traffic flows. There are a few places that will need widening. This could be accomplished most easily by using fill on the lower side of the road. There are many trees growing along portions of the Parkway, and all possible protection should be given to assure that the area remains in its present natural state.

This road is a very good dirt road at present and requires very little expenditure to put it in excellent condition throughout its entire length. The section between Holter and the proposed Historical area will need developing, although this should not prove to be a serious problem. A possible solution is to have the road course up the side of Mount Helena a short distance and then continue on to the Historical area south of State, via one of the long gully approaches. Between Holter and the end of the route, the road would be to the rear of the reservoir. This area could be opened up into a very fine park and playground.